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ABSTRACT

A study was carried out to investigate the organizational determinants of student achievement in 52 Newark, New Jersey, public elementary schools. Data consisted of information collected from questionnaires (for principals, teachers, and students) and school records, and of student reading and math achievement scores. Variables found to have a direct effect on student achievement included: (1) teacher expectations; (2) classroom instruction time; (3) frequency and amount of homework; (4) flexibility in grouping; (5) student attendance; (6) teacher absenteeism; (7) teacher commitment; (8) student morale; and (9) student aspiration. Variables found to have an indirect impact on achievement were staff competence; job codification; amount of communication and administrative support; teacher support of students; and frequency of administrative evaluation of teachers. The socioeconomic makeup of the student population was also found to affect student achievement and to affect organizational attributes of schools. (GC)

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ORET REPORT NO. 5

CHARACTERISTICS OF HIGH ACHIEVING ELEMENTARY SCHOOLS IN NEWARK

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NEWARK SCHOOL DISTRICT
RESEARCH REPORT

CHARACTERISTICS OF HIGH ACHIEVING ELEMENTARY SCHOOLS IN NEWARK

OFFICE OF RESEARCH, EVALUATION AND TESTING

Division of Program Monitoring and Evaluation
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PREFACE

This is the second year of operation of the Office of Research, Evaluation and Testing (ORET). The long range goal of the Office remains the same - to improve student achievement and personal growth. This research effort is aimed directly at that goal.

Like other urban districts, Newark has had problems regarding student performance. The Victoria Foundation, long committed to the improvement of educational opportunities for students, provided money to establish ORET. We are grateful for the continuing support of the Foundation during this second year.

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ACKNOWLEDGEMENTS

Any research project necessarily requires effort and cooperation from many quarters. This one is no exception. The authors of this report wish to thank those whose contributions made the project possible.

First of all, a very special thanks to all of the principals, teachers, and students who gave of their time in answering our questionnaires and graciously cooperated with us when we visited their schools and classrooms. Their warm reception was especially appreciated, given the many other activities occurring in the schools during our data collection period.

We are grateful for the support given by Eugene Campbell, who was Deputy Executive Superintendent of Schools at the time of our data collection, Robert Brown, Assistant Executive Superintendent, Area [illegible] Elementary Schools, and Mrs. Vivian Lampkin, then Acting Assistant Executive Superintendent, Area II Elementary Schools, all of whom were instrumental in pushing the project forward. Mrs. Grace Walls, Administrative Supervisor in the Deputy Executive Superintendent's office, willingly provided access to enrollment records.

Dr. Columbus Salley, our new Executive Superintendent, and Ms. Gladys Hillman-Jones, now Deputy Executive Superintendent (Academics) have both been very supportive of our research efforts. Ms. Hillman-Jones, as principal of George Washington Carver School at the time of data collection, welcomed us into her school and provided assistance to us during our stay there.

To Joseph Harris, Executive Director of Data Processing, Nathaniel Kelly, Chief Data Processing Operator, Betty Alonso, Supervisor of Keypunch, Eileen Bland, Senior Data Control Clerk, Dolores Strand and Renee McKinnon, Data Control Clerks, all of whom patiently endured our impositions upon their time and services, we express a very warm appreciation. Without their help, the project could not have taken place.

A special thanks goes to Dolores Brandao, Administrative Supervisor in the Office of Program Development, who was of invaluable aid in data collection - not only in making appointments for us, but also in frequently assisting in questionnaire distribution.

The members of the Local School Parents Council succeeded in making the coding task a lively one, instead of the chore and bore it can be. Our thanks to: Rose Crawford, Connie Gill, Aida Reyes, Emilia Rosario, Alfred Exum, Ruth and Eleanor Gary, Alvin and Alvina Conyers, Charles Mabray and Anna Jones.

Last but not least, we wish to acknowledge members of our own staff upon whom we imposed on many occasions. Hope Hartman-Haas, Tracy Chamberlin, Peggy Williams, Jacquelyn Henry, Joseph Mathew and Ram Durga - thank you for being there when we needed you.

ABSTRACT

Objective

The purpose of this research endeavor is to ascertain the organizational determinants of student achievement in the elementary schools in Newark. It is hypothesized that depending upon their goals and expectations, structure, and processes, some schools are more effective than others.

Procedure

Data were collected from all 52 elementary schools in Newark in May-June, 1981. Most of the organizational variables were measured by questionnaire items. Questionnaires were distributed to all principals, all classroom teachers third grade level and up, and sixth grade students. School records were used to obtain information regarding enrollment, attendance, ethnic and socioeconomic composition of the student population, pupil/teacher ratio, number of occupational specialists, and achievement scores. Third and sixth grade scores on the reading and math components of the Metropolitan Achievement Tests, administered in May, 1981, were used as indicators of achievement.

Data were aggregated at the school level. Thus, for each school there were average or mean responses calculated for each teacher and student questionnaire item, just as there were average achievement scores. In many cases an organizational variable was measured by several questionnaire items, the determination being made by factor analysis or previous research studies.

Multiple regression analysis, canonical correlation analysis, and path analysis were all used to assess the relative importance of the various organizational variables.

Results

It became clear in the preliminary analysis that not all of the variables hypothesized to have a direct impact on achievement did, in fact, do so. Rather the structural variables affected certain processes and such human factors as attendance

and morale, which, in turn, affected achievement. Also, there were variations in structure, process, and achievement depending upon the socioeconomic composition of the student population.

Direct Effects

Those variables which were found to have a direct effect on student achievement are:

Goals and Expectations

1. The expectations that teachers have of student achievement -

   The higher the teacher expectations, the higher the achievement scores.

Processes

2. The amount of classroom time spent on instruction, as reported by teachers -

   The more time reportedly spent on instruction, the higher the achievement scores (sixth grade).

3. The frequency and amount of homework given -

   The more homework, the higher the achievement scores (sixth grade)

4. Flexibility in grouping -

   Achievement is higher in schools with an average of two ability groups in a classroom than with three or more ability groups per classroom (sixth grade)

Human Dynamics

5. Student Attendance -

   The higher the average monthly attendance, the higher the achievement scores.

6. Teacher absenteeism -

   The lower the average annual absenteeism, the higher the achievement scores.

7. Teacher commitment -

   The higher the commitment, the higher the achievement (sixth grade reading).

8. Student morale -

   The higher the morale, the higher the achievement (math scores).

9. Self aspiration -

The higher the students' desired and anticipated educational level, the higher the achievement (sixth grade reading).

All of the above findings were predicted except the fourth. We anticipated that greater flexibility (more ability groups in a classroom) would be associated with higher achievement. Part of the reason it is not is because it is positively associated with the percentage of economically disadvantaged students in a school. That is, there are, on the average, more ability groups per classroom in schools with higher percentages of economically disadvantaged students (indicative of greater heterogeneity). The latter variable is negatively associated with achievement.

Indirect Effects

Those variables found to have an indirect impact on student achievement, through their direct relationships to one or another of the above variables which have direct effects, are:

Structure

1. Staff competence - job codification

Greater teacher competence in terms of training and experience is associated with less job codification. Less job codification is somewhat related to greater amounts of time on instruction and greater teacher support of students.

2. Staff Competence

Greater teacher competence in terms of training, and to a lesser extent, experience, and greater principal experience is associated with higher teacher attendance.

Processes

3. Amount of communication and administrative support -

The more "open" the school, in terms of greater communication among staff and greater administrative support of teachers, the higher the teacher commitment, the higher the expectation level of teachers, and the higher the student morale.

4. Teacher support of students -

The more supportive teachers are of students, in terms of being helpful and using positive reinforcements, the higher the student morale and the higher the student attendance.

5. Frequency of administrative evaluation of teachers -

   The more frequently teachers are evaluated and monitored, the lower the teacher absenteeism, and the higher the teacher commitment.

Effects of Socioeconomic Composition of Student Population

1. The schools which serve the economically disadvantaged have lower pupil/teacher ratios and thus an advantage in personnel quantity, but a smaller support staff and thus a staff with less diverse skills.

2. Students in those schools with a greater percentage of economically disadvantaged students report less teacher support in the form of assistance and positive reinforcement. However, this does not seem to be true for pupils enrolled in Title I programs.

3. Schools with higher percentages of economically disadvantaged students have lower teacher expectations.

4. Schools with higher percentages of economically disadvantaged students have lower student attendance and lower student morale. However, there is no relation between percentage disadvantaged and teacher satisfaction.

5. Teachers in schools with a greater percentage of economically disadvantaged students have smaller classes, but tend to be absent more often.

6. Schools with higher percentages of economically disadvantaged students have lower achievement scores.

Conclusions and Recommendations

Organizational factors have both direct and indirect effects on student achievement. The socioeconomic make-up of the student population also affects student achievement. Further, there are variations in organizational attributes of the school depending on the percentage of economically disadvantaged students in the school.

The following recommendations are based on the specific findings outlined under "Results" above:

1. It is suggested that an atmosphere of high expectations for student achievement be encouraged in the schools, particularly among the teachers, and particularly in those schools with greater percentages of economically disadvantaged students.

2. It would be desirable to make the deployment of qualified staff the object of systematic planning. Greater efficiency in the use of available resources, such that those who are the neediest educationally receive the more resources, may be the key to greater effectiveness.
3. It would be beneficial to the school system to either hire well-trained and experienced teachers or to encourage their further development while employed. Absenteeism would, thereby, be reduced and ultimately student achievement would rise.
4. Opportunities for both horizontal and vertical communication within the school should be created and administrative support for teachers should be encouraged, not only to enhance teacher commitment, but also their expectation level and thus indirectly student achievement.
5. It is necessary to address the issue of classroom management, particularly in the areas of time spent on instruction, homework, and support given to students, in order to improve student achievement. Teacher support is important for both student attendance and morale, all of which are more problematical in schools with greater percentages of economically disadvantaged students.
6. Direct efforts to increase the attendance of both teachers and students are strongly recommended.

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CHAPTER 1

INTRODUCTION TO STUDY: BACKGROUND, LITERATURE REVIEW, THEORETICAL FRAMEWORK, HYPOTHESES AND VARIABLES, DATA COLLECTION AND ANALYSIS

I. Background: During the past two decades there has been considerable research into the determinants of student achievement. Different conclusions have been drawn, however, regarding the role of schools. The research of the 60's documented the high correlation between student socio-economic background and student achievement (see especially the Coleman study, 1966; also Burkhead et al., 1967; Jencks, 1972). Those pupils from economically disadvantaged homes (which includes a disproportionate number of minority group pupils) do less well in school than those whose backgrounds are more economically advantageous. Further, according to these research findings, student background characteristics are better predictors of student success in school than any school attribute measured. The implication is, then, that there is little schools can do to affect that relationship - the force of one's home background is simply too strong for schools to overcome.

More recent studies have challenged these conclusions. While not denying that there is a correlation between student achievement and social class background, the researchers of the 70's found evidence to support the contention that schools can make a difference.

One of the reasons that schools have seemingly not made much difference in affecting the relationship between student class background and student achievement may be that there is not sufficient variation between schools. In recognition of this possibility, some of the more recent studies of school effects have concentrated on the extreme cases, i.e. the most and the least effective schools or school districts (see, e.g. California State Department of Education, 1977; Edmonds & Frederiksen, 1976; Klitgaard & Hall, 1975; Weber, 1971). The discovery that there are some schools which are succeeding in educating children from economically disadvantaged homes has opened new doors to our understanding of which attributes of school are most crucial in influencing student achievement.

A second difference between some of the newer studies and those of the prior decade has been to focus more intently on the school or school district as an organization. By drawing upon the knowledge base of organizational research, studies of schools have gone much beyond the atheoretical work of the 60's. (see Bishop & George, 1973; Bidwell & Kasarda, 1975; Miskel, et. al. 1977; Azumi, 1979).

The policy implication of focusing on the effectiveness of schools as organizations is clear. Contrary to the implications of the 60's research, which seemed to put the onus of outcome on the students themselves (and/or their parents, their peers, their neighborhoods), the later efforts assume that there are organizational variables which educational decision-makers manipulate which ultimately have an effect on student achievement.

II. Review of Research: There are essentially three kinds of organizational attributes which have been found to have an effect on school outcomes. (We shall concentrate here on only one outcome -- that of student achievement -- recognizing that there are several others which have been and could be studied.) These are: organizational goals, organizational structure and organizational processes.

A. Organizational Goals

Although there should be no quarrel that one of the primary goals of school systems is to teach basic skills, organizational researchers have long noted that there is often a discrepancy between "official" goals and "operative" goals (Perrow, 1961). Thus, "officially" schools may have the goal of teaching basic skills, but as far as the people within the schools are concerned, their main "operative" goal, that is, the one they are actually pursuing, could be very different -- maintaining discipline, for example. It is also true that schools, like many organizations, have multiple goals. Unless the goals are prioritized and clarified, organization members may be confused as to what is expected of them. Price (1968) gives some evidence that single goal organizations are more effective than those which pursue multiple goals, and further, that organizations with a high degree of goal specificity are more effective than those with a low degree of goal specificity.

One of the most consistent findings in school effects research is that in successful schools, there is a commitment on the part of the staff to academic pursuit, an expectation that students will learn, and an acceptance of responsibility for student achievement. Further, such a goal is clarified and articulated from the top down. In less successful schools, such commitment to academic achievement is missing. In some cases, students are "written-off" by school personnel, who believe that because of their deprived backgrounds, some students are unable to achieve. In other cases, the principal is more of a disciplinarian than an educational leader, and thus the emphasis is on maintaining order. In still other cases, there is a lack of articulation of goals. Brookover (1979) emphasizes the importance of school "climate" to achievement, climate consisting of the subculture of norms and expectations held by principals, teachers and students themselves. Wellisch (1978) points out that administrative leadership and academic standards differentiate successful schools from non-successful ones. Similarly, the California School Effectiveness Study (1977), McDill & Rigby's study of high schools (1973), Rutter's study of secondary schools in London (1979), Wynn's description of Chicago Schools (1981). Clark's (1975) study of high and low-achieving elementary schools. Weber's earlier study of successful inner-city schools (1971), as well as reviews by Austin (1979) and Edmonds (1979) all present evidence that in schools where achievement is higher, there is an emphasis by the staff on student academic performance and an expectation that students will achieve.

B. Organizational Structure

The structural variables that have been studied in school are:

1) Size (in terms of pupil population)
2) Class size or pupil/teacher ratio

3) Complexity
   a) Professional training and experience
   b) Professional activities of staff
   c) Degree of occupational or role specialization: number of different occupational specialities in a building; professional-support staff/teacher ratio.
4) Degree of formalization
   a) Degree to which curriculum is standardized
   b) The extent of rules and regulations
5) Degree of centralization of decision making

The evidence regarding the effects of these variables is mixed. Some of them have been studied at great length (e.g. class size); others have not.

1) Size

In organizational literature, size is generally considered an input variable which affects structural properties as well as processess, and thereby, has an indirect effect on outcome rather than a direct effect. This seems to be true in the case of schools as well.* In Bidwell & Kasarda's study (1975) of Colorado school districts and in Azumi's study (1979) of New Jersey School districts, the size of the district was positively correlated with the professional-support staff/teacher ratio, the pupil/teacher ratio, and the educational level of the staff. Size was negatively related to administrative intensity (administrator/teacher ratio). On the school level, also, among urban schools in New Jersey, size was positively correlated with the educational level of the staff and pupil/teacher ratio (Azumi, 1979).

Size did not have a direct effect on achievement in the Colorado Study, but in the New Jersey Study there was a negative relationship between size and achievement among low socioeconomic districts with large minority group populations. This held true on the school level as well - for 4th grade achievement only, not for 7th grade achievement. On the other hand, Rutter, et. al. (1979) found no relationship between size and achievement at the school level.

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* Per pupil expenditure is another input variable which affects achievement indirectly, rather than directly. It is not included here because, presumably within the district, there is little variation by school in per pupil expenditure.

2. Class Size

In a review of over a half century of research, Glass and Smith (1979) concluded that student achievement rises as class size is reduced (see also Cohen & Filby, 1979). They also found that smaller classes have favorable effects on teacher workloads, morale and attitudes toward students. Smaller classes were associated with attempts to individualize instruction and a better classroom climate (Smith & Glass, 1980). That the latter is important was revealed in an experiment reported by Shapson, et al. (1980). If smaller classes are to produce better results, teachers have to change their instructional strategies. If they do not, class size does not matter much.

In a study conducted by the Educational Research Service, only students in lower grades, disadvantaged children, and children with lower academic abilities benefited from smaller classes. Others did not (reported in New York Times, July 30, 1978). Summers & Wolfe (1975), in their study of Philadelphia public schools, also concluded that lower achieving students benefitted from smaller classes, whereas class size did not matter as much for higher achieving ones. Klitgaard & Hall (1975), using data from Michigan, found that unusually effective schools had smaller classes. Bidwell & Kasarda (1975) reported a negative relationship between pupil/teacher ratio and student achievement on the district level. Azumi (1979) found a similar relationship on the district level -- but only among those districts with a low socio-economic status population. Bridge (1979) in a review of several studies, suggests that the effect of class size may be curvilinear, and that future research endeavors should test non-linear relationships.

3. Complexity. Professional training and experience, professional activities of staff, occupational specialization or professional-support staff/teacher ratio

As stated earlier, many structural variables have not been included in educational research efforts, although they have been important in other organizational studies. One variable is complexity, which, according to Hage & Aiken (1967), is defined in terms of the number of occupational specialities, the length of training required by each occupation, and the degree of professional activity associated with each. Theoretically, complexity should be positively associated with student achievement — particularly in a school system with a heterogeneous population, since the various specialists would be better able to deal with the varying needs of students. However, complexity (as defined above) was not related to student achievement in the Miskel Study of Iowa schools (1977). It is interesting, though, that the degree of professional activity was positively related to teacher's perceived organizational effectiveness. (Miskel, et al. 1979).

If we look at each of the above measures of complexity separately, there does seem to be an association between role specialization and achievement and between the degree of professional training and experience and achievement. Bridge (1979) cites three studies which support the hypothesis that teacher role specialization is associated with higher achievement levels. Bridge adds a caution, however. Role specialization could be a proxy for the socioeconomic standing of the community. Rich communities can afford more specialists. The greater achievement of students in communities where teaching loads are less diversified may reflect the impact of non-school inputs.

As far as staff qualifications are concerned, the more successful schools in the California School Effectiveness Study (1977) had more educated and experienced teachers. Summers & Wolfe (1975) found that higher achieving students did better with more experienced teachers, but lower achieving students did better with newer teachers. Klitgaard & Hall (1975) report that in unusually effective schools, there were more teachers with five years or more experience. Bridge (1979) concludes from several research studies that, in general, teaching experience is positively related to student achievement, but that the relationship is likely to be curvilinear -- very positive over the first years of experience and flat (or negative) thereafter. Bridge also reports that the educational attainment of teachers has a positive effect on achievement, supporting a conclusion reached by Guthrie (1970) in an earlier review of teacher effects. There was a positive correlation between educational level of staff and 7th grade achievement in urban schools in New Jersey, but no relationship in the case of 4th grade achievement, (Azumi, 1979).

4. Formalization

A. Standardization of Curriculum

Theoretically, a completely standardized curriculum should have a negative impact on achievement for the same reasons that complexity was predicted to have a positive effect. Different children have different needs and learn in different ways. Standardization implies uniformity. Several studies support the argument. Simpson (1977) presents evidence that "multi-dimensionality" in terms of curricular differentiation has a positive impact on minority student achievement. Anderson (1971, 1973) reports that standardization of curriculum has a negative effect on achievement and also is a contributing factor toward high school students' feelings of alienation. In the California Study of 21 high achieving and 21 low achieving schools (1977), the low achieving schools were characterized as being at the extreme, i.e. either all students were using the same curriculum or there was complete individualization. The high achieving schools were somewhere in between in that there was some curricular differentiation, but it was not completely individualized.

B. Rules and Regulations

Schools which are orderly -- implying the existence of rules and their enforcement -- have better outcomes than disorderly ones (Weber, 1971; California Effectiveness

Study, 1977; Edmonds, 1979; Wynne, 1981). Contrary to their expectations, Miskel et al. (1977) found that having general rules for teachers was positively related to achievement. On the other hand, Anderson (1971) states that high schools which are overly bureaucratized (including having too many rules and regulations) have lower student achievement. It may be that the relationship between formalization and achievement is a curvilinear one. Some order is necessary for learning to take place, but when the maintenance of order becomes the primary activity, then learning suffers.

5. Centralization of Decision Making

Centralized decision-making structures resulted in lower student achievement in Miskel's Study of Iowa's Schools (1977), supporting a conclusion reached earlier by MacKay in his study of Canadian Schools (reported in Anderson, 1971). However, in both the California School Effectiveness Study (1977) and Rutter's London Study (1979), student achievement was higher in those schools where decisions were made at the senior level. The Rutter study makes clear, though, that teachers in successful schools feel that their views are represented in decision making. Part of the explanation for the conflicting findings here may be due to problems of measurement, as well as to a lack of distinction between structure and process. The degree of centralization is a structural variable referring to the level at which decisions are made. Highly centralized organizations are those where decisions are made at the top of the organization. This should not be confused with the process by which decisions are made. It is conceivable to have a centralized structure and yet have leaders who utilize a democratic process whereby they elicit the views of their subordinates before making decisions. This analytic distinction may not be a viable distinction in reality. Hage suggests that most processes are attached to structures and maintain those structures (1980:66). More research is needed to see if this proposition holds up in the case of schools.

C. Organizational Process

The late 60's research was often criticized for using data that was easily measurable and quantifiable but not particularly relevant. The inclusion of process variables has made some of the more recent school effects studies more interesting in terms of uncovering determinants of student achievement. Rutter (1979) concluded from an extensive in-depth study of 12 secondary schools in London that the process variables were the important ones affecting student outcomes. Because of the difficulty of measurement, many of these variables have been included in small studies only. Nevertheless, because they deal with activities and behavioral interactions within the building, it would seem obvious that they are important.

The particular processes which have been investigated in school effects studies include:

1) Leadership style and decision-making practices
2) Grouping practices
3) Communication and evaluation
4) Instructional intensity (including feedback mechanisms).

1. Leadership Style and Decision-Making Practices

Several studies emphasize strong administrative leadership as being an important component of successful schools (Weber, 1971; California School Effectiveness Study, 1977; Wellisch, 1978; Rutter, 1979; Edmonds, 1979). It is not always clear what this means, however, and as stated earlier, we suspect that part of the confusion is attributable to measurement problems and to conceptual fuzziness. Both the California study and Rutter report that in successful schools, principals are the ultimate decision-makers — indicating a centralized school as far as the structure of authority is concerned. However, there is some indication that participative decision-making processes work better than dictatorial ones (Miskel, 1977; Rutter et. al., 1979), meaning that teachers are consulted and their views are represented in decision-making.

Further, principals in successful schools are characterized as being helpful to and supportive of their teachers (California study, 1977). In the one study that clearly differentiated process from structural variables, centralization was negatively related to achievement, and participative processes were positively related to achievement (Miskel, 1977). This supports Pennings findings with regard to brokerage firms (1976). There, too, decentralized and participating firms were more effective in terms of both production and morale.

2. Grouping Practices

Schools are people-processing organizations. Children are the raw materials. How they are grouped in school reflects how they are defined and in part determines how they are treated. Children may be grouped by age with all those of the same age being treated uniformly. They may be grouped according to some criterion of ability, or they may not be grouped at all. One form of ability grouping is tracking, whereby children are placed in separate classes and all members of a particular class are treated similarly. On the average, tracking seems to have a negative effect on children (particularly low-achieving ones), although the evidence is mixed. The main drawback to ability grouping is that teachers form differential expectations of students and then treat them accordingly, thereby reinforcing their original expectations. (see Rist, 1970, and Brophy & Good, 1970, for evidence. See also Rosenthal & Jacobson, 1968, for further evidence of the connection between teacher expectations and student outcome).

Brookover (1979) noted that in the two high achieving schools, there was ability grouping within the classroom, but that there were several groups, movement between them was possible, and the basis for grouping was test score data rather than teacher judgment. In the two low-achieving schools, the children were grouped in such a way that movement between groups was less possible and thus children were in effect locked into a tracking system. In the California Study (1977), there was grouping within the classroom in successful schools, but children were carefully monitored and moved accordingly. A tentative conclusion, may be then, that if grouping is done in such a way that reflects a definition of children as having diverse talents and needs, and the purpose of grouping is to meet those needs, then achievement will be enhanced.

3. Coordination and Control: Communication, Evaluation

As organizations become more complex, the problem of integrating the various programs and activities increases. In addition, there is the problem of ensuring organization members' conformity to organizational goals. Communication and evaluation are both important processes in achieving organizational coordination and control and, are therefore, predictably related to outcome. There is some evidence that such is the case in schools. Wellisch (1978) constructed an index of administrative leadership which included characteristics of administrators which were highly related to one another and to school success. They included: how strongly the principals felt about instruction and whether or not they communicated these ideas concerning instruction -- as determined by whether or not teaching performance was regularly reviewed and discussed. A further correlate of student achievement was the extent to which the school's instructional program was coordinated (as opposed to teachers planning their own instructional programs for their own classes).

In Wynne's (1981) survey of 140 Chicago Schools (as gleaned from student reports) coherence, communication (up and down) and supervision of staff were all characteristic of successful schools. Brookover and his associates (1979) found that in the two high achieving schools, principals visited classrooms more often and were more supportive of their teachers than in the two low-achieving schools. The Michigan Cost Effectiveness Study (1976) emphasized the importance of the classroom monitoring role of the principals in successful school districts. Rutter et al. (1979) states that principals regularly check whether or not teachers assign homework in the successful schools in London. He also notes that in successful schools, planning was a group matter -- with the head of the department both monitoring and advising on curriculum planning --

whereas in the less successful schools, teachers worked on their own and there was little coordination between them.

4. Instructional Intensity and Feedback

Three kinds of within-classroom treatments seem especially relevant to student achievement -- all reflecting an academic emphasis. One has to do with the amount of time the teacher spends on instruction and to what extent homework is assigned and checked. The second has to do with the nature of reinforcement the teacher gives students, and the third concerns the degree to which pupil progress is monitored.

Bridge (1979) states that the less class time spent on discipline, the higher student achievement. Brookover (1979) confirms that in the two high achieving schools in his study, more class time was devoted to instruction than in the two low achieving schools. The Michigan Cost Effectiveness Study (1976) reveals that student achievement is higher when more teacher time is devoted to instructional activities. John Goodlad recently concluded that instruction time is a crucial variable in affecting student achievement (reported in the New York Times, October, 1981). Rutter (1979) found that schools in which staff assigned homework frequently had more positive outcomes.

In Rutter's study, also, there was a positive correlation between amount of reward and outcome, but a weak and inconsistent association between punishment and outcome. Rewards in this case included displaying children's work on walls and praising student's work. Brookover (1979) noted that in high achieving schools, positive reinforcement was used, but more importantly, it was clear, consistent and appropriate; that is, a child was not rewarded for substandard behavior. In the low achieving schools, reinforcement was not consistent and occasionally was inappropriate in that a teacher would praise a child who was performing below standard. Wynne (1981) writes that good schools use various "reward" incentives: honor roll, awards, etc. Teachers used more positive reinforcement in the seven high achieving schools studied by Clark (1975) than in the seven low achieving ones.

In successful schools, there seems to be a careful monitoring of student progress with adaptations made accordingly (see a report in the New York Times, May 28, 1973, describing two successful schools in New York City; also California School Effectiveness Study, 1977; Edmonds, 1979; Brookover, 1979). This fits in with the earlier statement regarding grouping practices -- children may be grouped according to ability, but their progress should be monitored and they reassigned as performance improves.

Summary

With the exception of the Rutter et al. study of secondary schools in London, most of the data regarding school processes come from small case studies. As noted earlier, many of the process variables are difficult to measure. Getting information requires more effort, since personal interviews and/or observations are necessary. The case studies have been very useful in pointing out some of the potential ingredients necessary to enhance student achievement. Many of them seem to be behavioral outgrowths of the goal of academic excellence. The studies do not reveal the relative strengths of these variables nor the direction of causation, but it would appear that if school personnel have high expectations regarding student achievement, then the processes of coordination, grouping, treatment, etc. are such that they enhance that achievement.

The principal's role is a crucial one in that strong administrative leadership is required. The principal sets the tone of the building. This does not mean that there are no differences from one classroom to another within either a successful or non-successful school. What it does mean is that it is easier to be a good teacher in some schools than in others. As Rutter states, "The overall ethos of the school seemed to provide support and a context which facilitated good teaching. Teaching performance is a functional of the school environment as well as of personal qualities." (1979, p. 139).

The above literature review primarily is a summary of studies done in the U.S. We have not attempted to evaluate these studies, but rather have concentrated on finding commonalities which serve as guides in the present research endeavor. As a postscript, we would add that the relationship between social class and student achievement is not as great in all countries as it is in the United States. In an excellent study of Japanese schools, William Cummings (1980) outlines those attributes of Japanese education that might help explain why Japanese children have such a high level of subject mastery (with a modest dispersion around the mean) compared to children from other industrially advanced societies. Some of those attributes are similar to items mentioned above: Japanese teaching is equitable in that teachers are committed to the notion that all children can learn and little attention is paid to innate abilities. In the initial period of school, teachers work to reduce differences in entry level characteristics. They also work to create an orderly atmosphere (thus by the end of the first grade, no more than 20% of time is devoted to discipline); they encourage participation on the part of students; give much positive reinforcement; and, especially in early grades, focus on feedback and monitoring. Within the school the faculty is the decision-making body and there is much communication between teachers to integrate the school program. One has a sense that education is a serious business in Japan -- beginning with a commitment to educate all children.

III. Theoretical Framework For This Proposal

The literature review reveals common threads differentiating successful from non-successful schools which form the basis for the hypotheses to be tested here. The relationship between structure, process, and outcome have seldom been included in one research endeavor -- in part because organizational theory is still relatively embryonic. However, Hage (1980) offers a number of propositions regarding such relationships which seem to encompass some of the findings in the literature review.

In essence, Hage's propositions have to do with the distinction between bureaucratic and professional models of organization (see Burns & Stalker, 1961, for an earlier description of this distinction — they use the terms "mechanistic" and "organic" organizations). A highly bureaucratic (or mechanistic) organization is one where authority is centralized, positions are stratified, work procedures are standardized, there are many rules and regulations governing people's jobs and their relations with one another. In a professional (or organic) organization, authority is more decentralized, there is less stratification, work procedures are less standardized, and there are fewer rules and regulations. Professional organizations are more complex, meaning that there are a greater number of occupational specialists with relatively high levels of training. Coordination is achieved by greater reliance on communication and feedback rather than rules.

The reasons for these different modes of organization are varied: size, technology, resources, and goals have all been found to affect the forms that organizations take. In the case of education – technology, size, and goals have historically worked at cross purposes.

The nature of the task, or technology, of an organization refers to the actions that organizational members perform upon an object, with or without tools or mechanical devices, in order to make some change in that object (Perrow, 1967). People processing organizations, such as schools, have a work-flow and add value to an object just as do industrial firms — only here the object is a person or client. One of the dimensions by which technology can be characterized (and thus organizations can be compared) has to do with the routineness of the task activity. Routinization, in turn, depends on firstly, whether or not the object to be processed is perceived to be uniform and stable (so that few exceptions in the work-flow will be encountered), and secondly, whether or not there is a sufficient knowledge base to deal with the exceptions that do occur. If there is uncertainty in the task (due to lack of uniformity of the object to be processed or to an inadequate knowledge base), then work activities are not routine and work procedures cannot be standardized. If the goal of schools is to ensure children's intellectual or cognitive growth, then the task is an uncertain one. Children come to school with different levels of intellectual, emotional and social development and with different abilities, personalities and values. Insofar as these things are related to further cognitive growth, clearly children cannot be perceived to be uniform. In addition, our state of knowledge about human behavior in general, and the teaching-learning process in particular, is not terribly well-developed. Thus, a variety of techniques may be required to teach a variety of children -- such techniques to be determined by feedback from the child him/herself. Clauset & Gaynor (1981) suggest that one of the fundamental differences between effective and ineffective schools lies in the relationship between observed achievement and the intensity and appropriateness of instruction. According to the feedback model, a negative feedback system should operate whereby low achievers get more intense instruction. Given the nature of the task, then, a considerable amount of student-teacher interaction, competent and experienced teachers who have sufficient discretion to deal with situations as they arise, and a careful monitoring of student progress would seem to be required. In other words, a professional organization would be more effective in terms of student achievement.

When compulsory mass education came into being, however, a decision in favor of bureaucratic organization prevailed -- particularly in urban systems -- as an efficient way of educating large numbers of students. Katz (1975) suggests that, in addition to efficiency, reasons for bureaucratic organization included the goal of developing non-cognitive attributes which would be beneficial to the work place -- docility, perserverance, obedience to rules and deference to authority -- rather than cognitive attributes. It would be easier to move potential members of the labor force into industrial bureaucratic organizations if they had previously learned appropriate bureaucratic behaviors. This goal, according to Katz, was particularly true in urban centers where there were large numbers of immigrants. Immigrants from diverse backgrounds posed a "threat" to the established Anglo order. Elizabeth Valence writes "With a shock of recognition we note today that schools are educating for docility, or that they operate to reinforce a class structure, or that teaching methods and curriculum content are saturated with a middle class value bias. These are precisely the grounds for which American schooling was initially justified" (1977, p. 661). The legacy is still with us. Madhere (1981) notes the association between student socioeconomic status and schools that serve custodial functions in New York City. Anderson (1963) pointed out in an earlier study that student socioeconomic status was related to the degree of bureaucratization of the school.

IV. Hypotheses and Variables

Given the fact that Newark is an urban school system serving a large minority group population, we expected that all schools would be bureaucratically organized to some extent. On the other hand, given an increasing concern about the underachievement of minority group students, including a mandate from the State of New Jersey that school systems make attempts to rectify this, and given, also, differences among principals, we also expected there to be differences between schools on the various organizational dimensions. Our general hypothesis was that a more professional or organic type of organization would be more effective in terms of student achievement than a rigidly bureaucratic one.

The dependent variable, student achievement, is measured here by the school's mean reading and math scores (by grade) on the 1981 Metropolitan Achievement Test. Two grades have been included - the 3rd and the 6th - the one representing the primary level and the other representing the intermediate level of education. Thus, each school will have four measures of effectiveness.

The independent variables include goal, structure, and process variables which are outlined below. Each variable was measured by one or more questionnaire items as indicated in Appendix A. In some cases the data were obtained from records (e.g. school size, pupil/teacher ratio, etc.)

I. Goals
    A. Goal articulation
    B. Academic vs. custodial orientation
        1. Principal and teacher priorities regarding responsibilities of schools.
    C. Expectations of achievement
        1. Principal and teacher expectations of student achievement.
        2. Teacher perceptions of principal expectations of student achievement.
        3. Student perceptions of teacher expectations of student achievement.

II. Structure
    A. Size of school
    B. Pupil/teacher ratio or class size
    C. Percentage of Title I students
    D. Degree of complexity
        1. Staff competence
            a. Educational level of staff
            b. Experience of staff
            c. Professional activities of staff
        2. Occupational specialization
            a. Professional support staff/teacher ratio
            b. Number of different occupational specialists
    E. Degree of centralization
        1. Extent to which decisions are made at the principal level or above
    F. Formalization
        1. Extent of job codification

III. Processes

- A. General Organizational Processes
    - 1. Amount of communication
    - 2. Extent to which administrators are supportive of teachers
    - 3. Degree to which teachers are evaluated and monitored
- B. Task Processes
    - 1. Grouping practices
        - a. Degree of heterogeneity in grouping pupils
        - b. Degree of flexibility in grouping pupils
    - 2. Treatment Practices
        - a. Amount of class time on instruction
        - b. Frequency and amount of homework
        - c. Teacher helpfulness and use of rewards
    - 3. Monitoring practices
        - a. Degree to which pupils' progress is monitored

We have hypothesized that the goals, structure and processes which differentiate bureaucratic from professional schools would be related to student achievement. The attributes of professional schools (as compared to bureaucratic schools) are: greater emphasis on academic achievement, a more competent staff, greater occupational differentiation, a less standardized curriculum, fewer rules and regulations, and a more decentralized authority structure with teachers having more autonomy and more input into decision making. Coordination and control is achieved primarily through communication and evaluation, rather than through formalized rules or a more centralized structure; more time is spent on instruction; grouping practices reflect a recognition of diversity in children; and pupil progress is more frequently monitored. Each of these professional school attributes is expected to be associated with higher student achievement.

		Bureaucratic Schools	Professional Schools
Goals:	Academic emphasis	-	+
	Emphasis on custodial activities	+	-
Structure:	Complexity		
	Staff competence	-	+
	Occupational differentiation	-	+
	Formalization	+	-
	Centralization	+	-
Process:	Degree of "Openness"	-	+
	Amount of differentiation in grouping practices	-	+
	Communication and Evaluation	-	+
	Instructional Intensity	-	+

Size of school, and student social composition might influence the above relationships. Since achievement is in part a function of student background characteristics, such factors need to be controlled for when assessing the impact of school attributes on achievement. There may also be a correlation between school attributes and student background characteristics. (See Azumi, 1979, for evidence of such correlations on the district level in New Jersey; and Brookover, 1977, for similar evidence on the school level). Finally, there is the question of whether or not minority (or lower class) students do better in predominantly white (or middle class) schools than in predominantly minority (or lower class) schools. Coleman's data indicated that they do. In St. John's review of several studies of school desegregation (1975), the conclusion is that the issue is more complex than simply school racial composition - there are many other variables which intervene. Patcher et al. (1980) gives evidence that white peer group influence does not affect black achievement, and suggests that it is perhaps the higher academic standards of teachers and administration in predominantly white settings which makes the difference in black achievement in such settings.

We have also taken into account the human factor. Morale and absenteeism can be thought of as other kinds of organizational outcomes, which may or may not be related to achievement, and, thus, may or may not intervene between the organizational variables and achievement. In addition to the organizational variables, the following "human dynamics" variables were included in the study: student attendance, student morale, teacher absenteeism and teacher commitment.

V. Data Collection and Analyses

Questionnaires were distributed to students, teachers and principals in all 52 elementary schools in Newark in May, 1981. Each school which has an annex is counted here as one school. Questionnaires were given to classroom teachers 3rd grade level and up (except in the K-4 schools where all classroom teachers were included), all principals, 6th grade students in forty-three K-6 or K-8 schools, and 5th grade students in three K-5 schools. The Office of Research & Evaluation staff visited each school and administered the questionnaire to the students directly. In the smaller schools all 5th or 6th graders present filled out a questionnaire. In the larger schools the maximum number of classes visited was four. A total of 3248 students (approximately 67%) responded. The teacher and principal questionnaires were left with the principal who saw to it that they were distributed. They were then collected several days later. All of the principals responded. The overall response rate of the teachers was approximately 75%, with a low of 36% in one school and a high of 100% in a few schools, for a total of 850.

Many of the organizational variables that we are using here have been included in one or another previous study. Their measurement was facilitated by using questionnaire items that have already been tested. Specifically, Bishop and George (1973) developed measures of organizational structure that were later used by Miskel et al. (1977), some of which we have included here. We have also used Brookover's (1979) items eliciting principal, teacher, and student expectations; process items from Rutter's (1980) study of

London schools; management and organization items from the Wellisch et al. (1978) study of ESAA schools; as well as communication and coordination items from a questionnaire developed by John Duggan of the Newark Teacher Resource Center. (See Appendix B for questionnaires used in this study.)

Data were aggregated at the school level, since the school is the unit of analysis. Thus, for each school, an average or mean response was calculated for each student and teacher questionnaire item or index of items.

In those cases where a variable was measured by several questionnaire items, the determination as to which items to include was made either by factor analysis or by previous research studies. Factor analysis is a technique which allows us to discover if, and to what extent, several questions may be measuring the same thing. When this is so, the questions may be combined, or one of them can substitute for all.

Most of the organizational variables were measured by questionnaire items. Some information, however, came from school records. Enrollment, attendance (teacher and student), Title I participation, ethnic composition and socioeconomic status of students, pupil/teacher ratio, number of occupational specialists, and achievement scores were either taken directly from records or were calculated from recorded data.

The primary technique used in the analysis of the aggregated data was multiple regression. By using multiple regression we can measure the relationship between a dependent variable and assess the relative importance of any one of the independent variables,* controlling for all the others. Path analysis was used to assess the indirect effects of some of the organizational variables on student achievement. A canonical correlation procedure, which combines features from regression and factor analysis, was used to address several questions pertaining to teacher's commitment to education, job satisfaction and absenteeism.

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* An independent variable is a causal or explanatory variable and a dependent variable is an effect or consequence variable. Changes in the independent variable should lead to changes in the dependent variable.

VI. Preliminary Analysis and Outline of Chapters

It became clear in the preliminary analysis that not all of the variables hypothesized to have a direct effect on achievement did, in fact, do so. Rather some have indirect impact through their effect on those factors which had a direct impact. The human dynamics variables are important "interveners" between structure and process, on the one hand, and achievement, on the other. Also, there are variations in structure and process depending on the socioeconomic make-up of the student population. The following chapters reflect the results of the preliminary analysis. Chapter 2 discusses the goal and expectation variables and their relationship to achievement. Chapter 3 examines the differences among schools in those structural and process variables having to do with resource allocation and management, and demonstrates that resource allocation and management varies depending upon the percentage of disadvantaged students in a school. Chapter 4 addresses the effects of structure on human dynamics. Chapter 5 addresses the effects of processes on human dynamics. Chapter 6 ties the process and human dynamics variables to student achievement.

CHAPTER 2

GOALS AND EXPECTATIONS: DETERMINANTS OF ACHIEVEMENT

As noted in the review of the literature, successful schools were differentiated from unsuccessful ones by their emphasis on academic pursuit. Further, successful schools had faculties with higher expectations for student achievement than did less successful ones. Finally, in the more successful schools the goals and expectations were clarified and articulated by the school administration.

We hypothesized that when the principal's goals are academically oriented and are clearly defined and articulated, and when the principal's expectations for achievement are high, student achievement will, in fact, be higher. We further hypothesized that when teachers perceived that the goals are academically oriented and when the teacher's own expectations are high, student achievement will be higher. Achievement is also expected to be higher in those schools where the students perceived that teachers are concerned about learning. In this chapter we discuss the results of the analysis of the goals and expectation variables and their relation to achievement.

I. The Dependent Variable: Student Achievement

Our measures of student achievement are the standardized scores of third and sixth graders on the reading and mathematics Metropolitan Achievement Tests. A school mean (average) was computed for each of the four measures. The intercorrelations among these four measures, as well as the total means and standard deviations* are shown in Table 2A.

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* The standard deviation is a measure of how closely the scores cluster around the mean. The smaller the number, the more homogeneous the data, or, conversely, the larger the number, the greater the variation in the data.

TABLE 2A

Zero Order Correlation Coefficients* of Achievement Scores, Plus Means and Standard Deviations

Variables	Read 6	Math 6	Read 3	Math 3
Read 6	1.00			
Math 6	.81	1.00		
Read 3	.49	.51	1.00	
Math 3	.47	.57	.75	1.00
Total Mean	70.8	83.6	53.5	58.1
S.D.	3.9	3.3	3.5	4.1
N =	44	43	52	52

The sixth grade reading and math scores are slightly more related to one another (.81) than are the third grade scores (.75). As far as the relationships among scores between grades is concerned, the correlations are positive between the sixth and the third grade scores, but they are not nearly as high as those within grades. In other words, those schools in which sixth graders have higher reading achievement also have higher sixth grade math achievement. We would, therefore, expect that the relationship between organizational variables and the two sixth grade achievement scores would be consistent. The same should be true of the third grade scores. However, there should be less consistency when we use both sixth and third grade scores as the indicators of achievement. Some variables may affect sixth grade achievement scores to a greater extent than third grade scores (and vice versa).

The standard deviations range from 3.3 (sixth grade math) to 4.1 (third grade math), which is quite a large range given the fact that all schools are within the same school district.

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* A correlation coefficient reflects the tendency of two or more variables to go hand-in-hand. It ranges from -1.00 for a perfect negative relationship to +1.00 negative relationship. A zero order correlation is a simple correlation, that is, it does not take account of any other variables which might influence the relationship.

II. The Independent Variables: Goals and Expectations

The goal and expectation variables were measured by using questionnaire items from all three groups of respondents: teachers, principals, and sixth grade students. There were a total of nine variables: three from the teachers' questionnaire, five from the principals' and one from the students' questionnaire. We initially tested the teacher and principal items separately.

Table 2B presents the means and standard deviations of all the goal and expectation variables. The mean scores vary depending upon the number of items which were used to measure the variable. If we take that fact into consideration, the mean scores of teacher expectations and teacher perception of principal's expectations are roughly the same. In both cases, the indication is that, on the average, roughly 50-69% of the students are expected to succeed. The principal's academic orientation average (3.21) indicates that most principals lean toward the higher end of the academic orientation scale (the range is from 1-8, 1 being the highest). The principal's expectations of student achievement are slightly higher than the teacher perceptions of principal expectations. If we were to compare them on a scale of one to ten (one being the highest), the teacher score would be 6 and the principal score would be 5. As far as the students' perception of teacher expectations are concerned, most students agree that teachers expect students to learn, but it is only a slight agreement (on an agree-disagree scale of 1-10, the score would be 4.7).

TABLE 2B

Means and Standard Deviations of
Goal and Expectation Variables

	Mean	Standard Deviation
Teacher Expectations	11.85	1.59
Teacher perception of principal's expectations	5.96	.92
Goal Articulation	.82	.37
Principal's academic orientation	3.21	.98
Principal articulation of goals	1.63	.74
Principal expectations	10.58	2.80
Student perception of teacher expectations	3.78	.30

A. Teachers

The three indices of teacher goals and expectations were each created by adding two or more questionnaire items at the time the data were aggregated. (See Appendix A for the list of items.) Briefly they are:

1. teachers' expectations for student achievement
2. teachers' perceptions of the principal's expectations for student achievement
3. teachers' perceptions of the extent to which goals are defined and articulated

We regressed* achievement scores on these variables. In Table 2C we see that the significant variable related to achievement is the teachers' own expectations for achievement. The teachers' perceptions of the principal's expectations is positively associated with achievement, although not significantly so. It should be noted, however, that the teachers' own expectations and their perceptions of principal's expectations are highly correlated with one another (.88). It would, therefore, be more accurate to say that the combination of the two variables is important to achievement, and in subsequent analyses we did combine them and created a new variable - still referred to as teachers' expectations.

TABLE 2C

Standardized Partial Regression Coefficients**
from Regression of Achievement Scores on
Teacher Goal and Expectation Variables

Variables	Read 6	Math 6	Read 3	Math 3
Teacher expectations	.55***	.27	.71****	.34
Teacher perception of principal expectations	.01	.25	.18	.14
Goal articulation	-.01	-.05	-.09	.02
R^2	.30****	.22***	.28****	.22****
N =	43	43	52	52

* As noted in the last chapter, regression analysis allows us to assess the relative importance of each of the independent variables in affecting achievement, after the other variables have been controlled for.

** These are also called beta weights.

*** Statistically significant at the .05 level.

**** Statistically significant at the .01 level.

The goal definition and articulation variable is not statistically significant and was, thus, eliminated from further analysis. The zero order correlations between goal articulation and achievement, which ranged from .05 to .23, are erased when the expectations variables are introduced into the equation. This is because goal articulation is somewhat related to teacher expectations. When the latter variable is controlled for, goal articulation has no independent effect on achievement.

The R^2 at the bottom of Table 2C is an indication of the amount of variation in achievement that is explained by these variables and is to be read as a percentage. The teacher goal and expectation variables combined account for 30% of the variation in sixth grade math, 28% of the variation in the third grade reading, and 22% of the variation in third grade math. They do have some significant effect, but, obviously, much of the variation in achievement is yet to be explained.

B. Principals

Items from the principal questionnaire concerning goals and expectations include the following:

1. principal's academic orientation*
2. principal's opinion as to how good the school can be
3. principal's articulation of goals
4. principal's specific expectations for student achievement

The variables principal's academic orientation and principal's opinion of school were highly correlated with one another. We concluded that they both had to do with the principal's academic orientation and, therefore, we combined them into a new variable called principal's academic orientation.

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* A similar variable was constructed from the teacher questionnaire but was not used because there were too many "No Answers".

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TABLE 2D

Standardized Partial Regression Coefficients from Regression of Achievement Scores on Principal Goal and Expectation Variables

Variables	Read 6	Math 6	Read 3	Math 3
Principal academic orientation	.31	.25	.33*	.29*
Principal goal articulation	.03	.12	-.08	.02
Principal expectations	.25	.46**	.37**	.37**
R^2	.18	.32*	.30*	.25*
N =***	29	29	34	34

The principal's academic orientation variable is significantly related to achievement at the third grade level and is positively correlated (although not significantly so) at the sixth grade level. One of the reasons why the relationship is not significant at the sixth grade level may be because the sample is slightly smaller.

The variable eliciting the principal's own expectations for achievement is also positively and significantly associated with achievement in all cases except sixth grade reading. The principal's articulation of goals is not associated with achievement and was eliminated from further analysis. The amount of variation in achievement accounted for by these variables ranges from 18% to 32%, about the same as the teacher combination.

The next step in the analysis was to include the significant teacher and principal variables in one regression equation to see exactly how much influence each has, as well as how much influence the combination has. In this equation we have also included the variable from the student questionnaire, which has to do with the students' perceptions of how important it is to teachers that students learn (see appendix A). The zero order correlations between this variable (student perceptions) and achievement range from .25 (third grade math) to .41 (sixth grade reading).

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* Statistically significant at the 05. level.

** Statistically significant at the .01 level.

*** The N is smaller in this table because of the variable principal's academic orientation. Some principals did not respond to the academic orientation questions.

Table 2E below presents the zero order correlations among the goal and expectation variables, and Table 2F gives the results of the regression analysis.

TABLE 2E

Zero Order Correlation Coefficients
of Goal and Expectation Variables

Variables	1	2	3	4
1 - Teacher's expectations	1.00			
2 - Principal's academic orientation	.47	1.00		
3 - Principal's expectations	.33	.15	1.00	
4 - Student perceptions	.44	.54	.04	1.00

As can be seen from Table 2E, there is some relationship among the goal and expectation variables. Students' perceptions of teacher expectation is related to both the teachers' expectations (.44) and to the principal's academic orientation (.54), meaning that, to some extent at least, in those schools where expectations are higher, students perceive greater concern on the part of teachers. There is also a slight correlation between teachers' and principal's expectations (.33). This association is not nearly as strong, however, as that between the teachers' expectations and their perceptions of principal expectations.* Obviously, perceptions of others' attitudes may or may not coincide with their actual attitudes.

When these four variables are included in one regression equation, whereby each can be assessed independently of the other in terms of its relation to achievement, the teacher expectation variable bears the strongest and only significant relationship. As can be seen in Table 2F, the relationships between teachers' expectations and achievement range from .37 (sixth grade math) to .51 (sixth grade reading and third grade math.)

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* As stated on page 27, the correlation is .88.

TABLE 2F

Standardized Partial Regression Coefficients from Regression of Achievement Scores on Goal and Expectation Variables

Variables	Read 6	Math 6	Read 3	Math 3
Teacher expectations	.51**	.37*	.47**	.51**
Principal's academic orientation	-.09	-.09	.12	.06
Principal's expectations	.02	.71	.14	.10
Student perceptions	.21	.27	.03	—
R^2	.35*	.29	.38**	.34**
N =	31	31	34	34

The combination of these goal and expectation variables, as measured by average responses from each of three groups of school personnel, explains more of the variation in achievement than did the variables from any single group. The range is from 29% in the case of sixth grade math to 38% in the case of third grade reading.

III. Summary and Discussion

It seems clear that expectations for student achievement are related to actual achievement in the Newark elementary schools. When expectations are higher, achievement is higher. It is also clear that it is the teachers' expectations which are the more crucial determinants of achievement, rather than the principal's expectations or the students' perceptions of teacher concern. When the principals' goal and expectation variables were related to achievement independently of the teacher variables, the principal's expectations were correlated with achievement. However, this correlation disappeared when the teacher expectation variable appeared in the equation, because teachers' expectations and principal's expectations are related to one another. When each variable is related to achievement, controlling for the other, it is the teacher expectation variable which determines achievement.

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* Statistically significant at the .05 level.
** Statistically significant at the .01 level.

Similarly, in a zero order correlation, student perceptions of teacher concern was related to student achievement. Student perceptions of teacher concern was also related to both teacher expectations and to principal expectations. When both of the latter were controlled for, the zero order correlation between the student variable and achievement was reduced to below the significance level.

Although the teacher expectation variable is the more important determinant of achievement, the combination of the teacher, principal, and student goal and expectation variables accounts for more of the variation in achievement than any single one of them. Ideally, then, the high achieving school will have a principal with an academic orientation and high expectations, teachers with high expectations, and students who perceive that their teachers care whether they, the students, learn or not.

The definition and articulation of goals, as measured by teachers' perceptions and by the principal's report of his/her own behavior, was not related to student achievement in this sample.

In terms of causation we have implied that high expectations lead to high achievement. One could posit the opposite: when achievement is high, expectations are high. That is, teacher and principal expectations for achievement are realistic assessments of student performance. The problem with this argument is that it puts the onus on the students themselves rather than on the staff. We argue that expectation level is, at least in part, a causal variable. According to the concept of "self-fulfilling prophecy"*, people behave on the basis of what they believe to be true, and in so doing, they bring about that truth. If teachers believe that their students can achieve, they will behave toward those students in such a way so as to enhance their achievement. Conversely, if they believe students cannot achieve, their behavior - perhaps in the form of less homework, easier assignments, etc. - will result in lower achievement.

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* The concept of self-fulfilling prophecy derives from a statement by W.I. Thomas, "The things that men believe to be real are real in their consequences" p. 198 in "The Relation of Research to the Social Process," in Brookings Institution, 1931, pp. 175-194.

Conclusion and Recommendations

We conclude that high expectations on the part of the staff are important predictors of high student achievement. The staff members whose expectation levels are most crucial are the teachers. It behooves all administrators, then, to create an atmosphere of high expectations within the school. As noted, teacher expectations and their perception of principal expectations go hand-in-hand. The important thing is that teachers feel that their principals have high expectations, and this is associated with their own high expectations.

CHAPTER 3

ORGANIZATIONAL STRUCTURE AND RESOURCE ALLOCATION AND MANAGEMENT

Perspective

The most common approach used in studying school effectiveness is to see how well the school concentrates on academic pursuit. That approach, explored in the preceding chapter, usually links the goals and/or expectations of the staff with pupil achievement. The analysis, however, cannot be limited to that area for at least two reasons: a) First of all, it has often been shown (Drabek and Chapman, 1973) that the measurement of organizational goals or even people's expectations is a difficult and possibly an unproductive task because official goal statements rarely match actual practices. In other words, very few teachers, if any, would tell a researcher or parent that they do not expect much from their students. b) But even when that measurement problem is solved, the goal-approach fails, in a sense, to show the individual school as an open system, i.e. one which is in relation with and under the influence of external agents. One of those 'external agents', possibly the most significant one, is the district's central administration. It is not rare to hear a principal say: "If I could get the resources I need, I would be able to have a better school". Such a statement implies that there is a relationship between resource allocation and pupil achievement.

The position/proposition just mentioned is not simply empirical, it has been given some consideration in the literature, notably by Seashore and Yochtman (1967). In a sense, it shifts the focus from the micro (local) level to a macro (district) level of analysis. In what they present as an alternative to the goal-approach, Seashore and Yuchtman outline a "system-resource" approach for the study of organizational effectiveness. In that perspective, an organization is effective if it succeeds in attracting (and keeping) the various resources it needs to accomplish its main task; the greater the resources, the greater the performance.

In general, resources can be classified into two major categories: materials and technology. In the educational context, the first category includes such items as desks, books,papers, and so on; as for technology, Hage (1980) makes the point that it can be equated to knowledge, especially as it is reflected in staff qualifications. Given the nature of the task of educating, knowledge would seem to be the more important of the two resource-bases. However, its allocation within a particular school district may receive the least attention. Inventories of equipment and materials are likely to be performed once a year, and the remark reported earlier and attributed to principals often pertains to the distribution of materials. But the deployment of qualified staff to meet the overall educational needs of pupils may not follow a systematic plan.

Resource Allocation

The present study attempts to determine whether the allocation of the knowledge-resource, i.e. the assignment of qualified staff from school to school in the Newark School district, is targeted at the points of greatest need. A school can be considered as a point of great need based on the percentage of economically disadvantaged pupils in the student body. These economically disadvantaged are often at an educational disadvantage, as indicated by the corresponding percentage of Title I pupils in each school. In relating these indices to the knowledge-resource, three questions are of interest:

1. Do the schools serving the least disadvantaged students, where achievement is usually greater, have proportionally more teachers than the schools serving the underpriviledged pupils have? In other words, is the pupil-teacher ratio smaller at the former schools?
2. Do the schools serving the least disadvantaged students have a staff with more formal and informal training than the schools serving the more disadvantaged have? In other words, are the teachers and the principal more experienced, and/or do they hold more advanced degrees?
3. Do the schools serving the least disadvantaged students have more support staff than the schools serving the more disadvantaged pupils have? In other words, is the number of occupational specialists greater at the former schools?

Method

The investigation is based on 80% of the public elementary schools in Newark (41 out of 52, for which complete data were available). Information regarding each teacher's training and experience, each principal's training and experience were gathered directly through individual questionnaires. Indexes of pupil-teacher ratio and the various occupational specialists (number of reading and math specialists, for example, who form the support staff) at each school, were based on data in the central administration's files. The number of pupils in the free-lunch program was used to calculate the percentage of disadvantaged in the student population. The percentage of Title I students at each school in the year 1980-81 was available from a recent evaluation report (August 1981); this measure was modified into a ten-interval variable, covering a range from 20% to 65%.

Each of the three questions outlined above could be examined separately. But the variables subsumed under each question may not be independent from one another. For example, since specialization is related to formal training, it seems likely that the greater the number of occupational specialists at a school, the greater the number of teachers with an advanced degree. In view of that, it was deemed desirable to look at all the variables together.

A multiple regression procedure* was used, in which the variable economic status — percent disadvantaged — was regressed ("predicted") from the index of Title I enrollment, pupil-teacher ratio, teacher training and experience, principal training and experience, and number of occupational specialities. Through a hierarchial procedure, the variable Title I enrollment was first entered into the equation, in order to obtain support for an assumption made earlier that educational disadvantage overlaps considerably with economic disadvantage.

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* A multiple analysis of variance approach would seem more appropriate since socio-economic status (% disadvantaged) is presented as the independent variable in the formulation of the research questions. The regression procedure appears to reverse the order of things. But the final results — i.e. the total F-value and the beta values — are the same with either technique (see Hull and Nie, 1981, SPSS update, p. 42-45).

Results

The means and standard deviations for the eight variables included in the study are reported in Table 3A. From these figures, one can derive the following information: a) In terms of training, practically all principals in the school district have earned a Master's degree; while the average teacher has a bachelor's degree, approximately one third of the teaching staff is in the process of obtaining an MA. b) Regarding experience, a slight majority of the principals have been in place for less than five years; as for the teachers, 80% of them have more than four years of experience, 50% more than six years of experience. c) On the average, there are 21 to 25 pupils per teacher. d) Although the school district serves a population disadvantaged at 81%, only 35% to 39% of the student body is receiving remedial support through Title I.

Tables 3B and 3C present the correlations of the structural variables and the structural and task process variables. The results of the regression analysis are presented in Table 3D. A multiple correlation coefficient of .63 indicates that there is a good association between the service delivery system (which includes all the predictors) and the percentage of disadvantaged students at a school. This correlation coefficient and its corresponding percentage of variance (.40) are supported by an F-test value of 3.20, which is statistically significant at the .05 level. The variables that contribute most to the strength of the association are, in order of importance: Title I enrollment (beta = .51), pupil-teacher ratio (beta = -.24), number of occupational specialists (beta = -.19). Everyone of the remaining variables, pertaining to staff training and experience, shows a coefficient of .10 or less, and all together they do not account for even 5% of the variance (.02/.40). That is obviously not statistically significant.

So the conclusion from this study can be stated simply as follows: the higher the percentage of disadvantaged students in a Newark school, the higher the Title I enrollment, the lower the pupil/teacher ratio, and the lower the number of occupational specialists.

TABLE 3A

Means and Standard Deviations for 14 Variables Used in the Resource Allocation Study (N=41)

Variables	Mean	Standard Deviation
Teachers' experience	8.3	.82
Teachers' training	11.1	.81
Principal's experience	5.8	2.28
Principal's training	4.1	.34
Staff competence	29.4	2.75
Title I	3.8	2.30
Centralization	14.3	5.11
Codification (standardization)	8.1	2.65
Instruct. Time	62.2	8.75
Homework	1.8	.34
Staff support	9.3	.84
Pupil/teacher ratio	23.8	2.76
Occ. specialists	15.7	3.38
Disadvantaged	81.2	11.79

TABLE 3B

Correlations Among 8 Structural Variables (N=41)

Variables	2	3	4	5	6	7	8
1 - Title I	-.12	.09	-.07	.28	.08	-.06	.53
2 - P/T ratio		-.03	.25	-11	.21	-.06	-.32
3 - T. exper.			.16	.21	-.03	-.14	.09
4 - P. training				.02	.03	-.11	-.15
5 - P exper.					.00	-.20	.11
6 - T. training						.00	-.08
7 - Occ. spec.							-.19
8 - % Disad.							

TABLE 3C

Correlations Among Task Processes and Structural Variables

Variables	2	3	4	5	6	7	8	9
1 - Title I	-.12	.28	.53	-.09	-.02	-.07	-.07	.16
2 - P/T ratio		-.01	-.32	.07	.22	.02	-.12	.07
3 - Competence			.08	-.02	-.40	-.28	-.05	-.17
4 - % Disad.				.00	-.09	-.20	.04	-.30
5 - Centralization					.06	.05	.08	.04
6 - Codification						-.07	-.16	.26
7 - Homework							.06	-.29
8 - Instr. Time								.00
9 - Support								

TABLE 3D

Regression of Socio-economic Status on Other Organizational Structure Variables (N = 41)

Variables	R	R^2	beta
Title I	.54	.24	.51
P/T ratio	.58	.34	-.24
Teachers' experience	.59	.35	.04
Principal's training	.60	.36	-.08
Principal's experience	.60	.36	-.10
Teachers' training	.60	.36	-.07
Occup. Specialists	.63	.40	-.19

(F = 3.20; df = 7/33)

Discussions and Implications

The analysis shows that, contrary to expectations, the Newark schools serving the more disadvantaged pupils tend to have proportionately more teachers than those serving the least disadvantaged. That allows them to maintain a lower pupil/teacher ratio. But it is also important to notice that they also work with a more limited support staff, i.e. they have fewer occupational specialists. Although the trend associated with either variable is only a moderate one, (regression coefficient less than .25) the global picture seems to reflect an issue of quantity-versus-quality: the schools with the neediest pupils have the advantage in personnel quantity while the other schools can count on a staff with more diverse skills.

Is the skills diversity associated with greater qualifications of the teaching staff? Not Necessarily. Indeed, the correlations between the teachers' level of training and experience on one hand, and the index of occupational diversity on the other hand, average only a -.07. If skill diversity is associated with anything, it is with the measure of principals' training and experience (the correlations with these variable average -.16). This means that the principals with less advanced training and/or experience are inclined to look for occupational specialists.

Beyond this issue of skill diversity, however, there are no differences in either training or experience between the teaching staff working with underprivileged pupils and the staff working at less disadvantaged schools. The same is true for the principals. Interpretation of this specific point must be carefully developed. The evidence presented here should not lead anyone to infer that the pupil underachievement problem in Newark is not at all connected with staff qualifications. The only conclusion that can be legitimately derived is that the allocation of competent staff is evenly done from school to school. In that respect, the following paradoxical questions can still be asked: Is the spreading of competent staff more beneficial to pupils than would be its concentration at the points of greatest need? In other words, can the disadvantaged schools — where achievement is usually lower — ever 'catch up', if they are not clearly and boldly granted a larger share of the knowledge - resources? Many previous studies have shown that the greater the staff competence, the better pupil performance. While that has become an educational truism, another simple principle is not as widely accepted: the greater or more urgent the task, the greater should be the competence of the task force.

This issue of resource allocation, has relevance mainly for long-range, district-wide planning. Implicitly, it points to a question (if not a task) for the central administration, but this is only one aspect of the problem. Another aspect, of more immediate significance, remains to be explored: if there is no great variation from school to school in staff qualifications, if the existing service delivery system is the same throughout, what is responsible for the performance difference between schools in the district? Logical analysis suggests clearly one thing: the fact that the delivery system is the same is no guarantee that the service is the same. Comparable level of competence does not automatically lead to comparable implementation. That is why it is important to go beyond the issue of resource allocation, and look into resource management.

Resource Management

The study of resource-management in a school, even when it is limited to the knowledge-base, can be a complex and extensive task. Resource management covers a variety of activities, from curriculum design, tutorial/remedial service, grade-to-grade or program-to-program coordination, to instructional format, discipline, testing and grading procedures, etc. But, one can operate on the premise that all these activities are reflected in the teacher's role; as pointed out by Brinson (1980) the teacher is the moving force in a school organizational structure and behind most organizational processes. In that context, the study of resource-management consists first and foremost in finding out how big a role is assumed by the teacher in and out of the classroom.

A person's role in any organization or social group is usually defined in regard to his/her status as well as the task he/she performs. The teaching tasks or classroom practices considered here all pertain to the degree of instructional intensity.* They are: the amount of time spent on instruction (as contrasted to discipline or administrative duties); the amount and frequency of homework; and the extent of affective support or reinforcement given to students. As for teacher's status, it is measured by the degree of teacher's participation in the decision-making process, and the extent of codification of his/her job. Greater participation in decision making and flexibility in job codification implies greater use of, and consideration for a teacher's competence, at least in the selection, design, or implementation of the curriculum. Thus, although a teacher's role is conceivably the same at any school, his/her status may vary.

Teacher's status and teaching practices commonly seem to be related to at least two variables: teacher's competence and the scope of the task at hand. a) The literature on organizational theory suggests that the more competent the staff, the lower the need to standardize the task (Burn and Stalker, 1961), and also the greater the participation in decision making (Hage and Aiken, 1967). The same can be said regarding task scope or variability (Blau, 1970; Hage and Aiken, 1969), measured here through pupil-teacher ratio and level of Title I enrollment. b) In the educational domain properly, one would expect a positive relationship between competence and instructional intensity, but a negative one between task scope and the latter variable set. In other words, a more competent staff is likely to engage in better pedagogical practices, leading to greater instructional intensity. But a large pupil-teacher ratio is likely to reduce pupil-teacher interaction, thus instructional intensity; similarly, when Title I enrollment is large, instructional intensity may be limited in order to accommodate the variation in pupil ability/performance level.

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* All three variables have been found, in this and other samples, to be among the best predictors of achievement.

This study will obtain evidence on all the above propositions. However, the question of utmost interest is: whether the differences between the schools serving the underprivileged and those serving the less disadvantaged pupils are related to pedagogical practices (instructional intensity) and/or to a less extensive use of teachers' skills (by over-emphasizing centralization and job codification).

Method

Five hypotheses must be tested to answer the research questions. The analysis is based on the same 41 schools that were examined earlier. Three of the variables — Title I enrollment, pupil-teacher ratio, and socio-economic status (percent disadvantaged) — were described in connection with the resource allocation study. The variable staff competence is a combination of teachers' training and teachers' experience. The indexes of centralization, job codification, instructional time and frequency of homework assignment were calculated from questionnaire items administered to teachers and principals (see Appendix A).

The measure of staff affective support (show of concern, praise, reward) was also obtained via questionnaires administered to students.

Five multiple regression procedures were carried out, relating successively the indices of centralization, codification, instructional time, homework frequency and affective support, to a set of four independent variables, including staff competence, pupil-teacher ratio, Title I enrollment, and proportion of disadvantaged pupils. In every case, the latter variable was constrained to appear last in the regression equation. That kind of limitation makes it more difficult to observe statistical significance for this variable. But the approach is the only one apt to substantiate beyond any doubt the hypothesis of interest.

Results

The means and standard deviations for the nine variables included in this section are reported in Table 3A. From these figures, one can derive the following information: a) On the average, students feel that the teaching staff is doing a better than average job in providing the kind of affective support they need. The mean score of 9.3 on the variable reinforcement would correspond, on a scale of 1 to 10 (1 being the highest) to a rating of 4.6. b) On the cognitive side, teachers seem to be operating at a fairly high level; the mean score of 1.85 on the variable homework indicates that teachers assign homework, if not every night, at least three times a week. c) As for instructional time, it is observed that actual teaching tasks take 62% of the teachers' time, the rest of the school day being devoted to discipline problems and other administrative duties. Looking at the standard deviation, one can infer that no more than 16% of the teachers are able to put 70% of their time into instruction. d) Teachers feel that their job is codified to a great extent, but that the possibility exists to participate in decision making at the school level. The mean score of 14.3 on the variable centralization would correspond, on a scale of 1 to 10 (1 being the highest) to a rating of 3.

The results of the regression analyses for the status variables are presented in Table 3E. A multiple correlation of .08 for the variable job centralization indicates that there is actually no association between this variable and either staff competence, task scope, or proportion of disadvantaged. These predictors show only a moderate relationship to job codification, as indicated by a multiple correlation of .45. This correlation is supported by a significant F-test value of 4.94. Two of the variables in the predictor set, however, did not reach significance. Title I enrollment shows a regression coefficient of only .12, and the variable percent disadvantaged has a beta of less than 01. Turning now to the instructional intensity variables, we observe that only one could be predicted beyond chance level from the set of independent variables. Indeed, these variables cannot even explain one percent of the variance in instructional time, and hardly 12% of the variance in amount of homework assignment. None of these values, of course, is statistically significant. On the other hand, more than 29% of the variance in the variable affective support can be explained from these predictors. Two of the variables in the set, however, are not significant contributors to that prediction. They are: staff competence and pupil-teacher ratio. The variable Title I enrollment with a coefficient of +.54, has the strongest link to reinforcement, followed by proportion of disadvantaged with a regression coefficient of -.29.

TABLE 3E

Regression of Various Resource-Management Indices on Four Structural Variables (N = 41)

Dep. Var.	Indep. Var.	R	R^2	beta
Centralization	P/T Ratio	.07	.005	+.08
	Competence	.07	.005	-.02
	Disadvantaged	.08	.006	+.03
	(F = .08)			
Codification	Staff competence	.40	.16	-.39
	P/T ratio	.45	.20	+.21
	Title I	.45	.20	+.12
	Disadvantaged	.45	.20	+.01
	(F = 4.94)			
Homework	Staff competence	.28	.08	.27
	P/T ratio	.29	.08	.04
	Title I	.29	.08	-.01
	Disadvantaged	.34	.12	.19
	(F = 1.66)			
Instruct. Time	P/T ratio	.12	.01	-.12
	Staff competence	.13	.02	-.06
	Title I	.13	.02	-.08
	Disadvantaged	.13	.02	.01
	(F = .37)			
Support	Staff competence	.17	.03	-.14
	P/T ratio	.19	.03	-.01
	Title I	.57	.32	+.54
	Disadvantaged	.63	.39	-.29
	(F = 10.28)			

Discussion and Implications

From the first part of the analysis, one can conclude that the degree of centralization of decision making in a school is unrelated to either the personnel's competence, the scope of the task at hand, or certain characteristics of the clientele served. Centralization, in the view of most teachers, is high; many of them report, for example, that even "when changes are made which affect their job, they do not have much input". Such results lend credence to the idea that the schools are organized according to the bureaucratic model that remains unchanged or even unchangeable regardless of the actual dynamics of the situation. At the classroom level, there seems to be some flexibility. But it is not so much in response to the demands of the task; indeed neither the pupil-teacher ratio nor the level of the Title I enrollment — which defines the task scope — is associated significantly with the index of job codification. Rather, this variable is related to staff competence, indicating that latitude in organizing their class is a kind of "privilege" earned only by the teachers with greater experience or more advanced training.*

In this chapter, the evidence is not direct on how the teacher's status variables -- centralization and job codification -- affect pupil achievement. But, from the correlation matrix (Table 3C) one can study their relationship to teaching practices. It is clear that the degree of centralization of decision making does not in any way influence pedagogical practices; the correlation between centralization and instructional time, frequency of homework, or affective support for students, never reaches .10. For the other variable, the relationship though modest, is stronger and positive. Thus, the greater the latitude given to a teacher, i.e. the lower the job codification, the greater the time spent on instruction ($r = -.16$) and the greater the affective support he/she tends to give to the pupils ($r = .26$)

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* Just like the variable centralization, job codification has no relationship to the socio-economic index, percent disadvantaged. In view of this, one can say that teacher's status at the schools serving the underprivileged pupils is no better or worse than it is at the schools serving the least disadvantaged students.

As reported earlier, of the three pedagogical practices studied here, the two pertaining to academic emphasis — instructional time and frequency of homework — do not show any significant relationships to the four independent variables. This means that even in cases where there is great variation in student ability or performance, the instructional intensity is about the same. The notion of instructional intensity is, however, relative in the present context. Indeed, one may again underline the fact that, in the great majority of schools, less than two-thirds of the teacher's day is spent on class instruction. Comparatively, the mean of 62% on instructional time for the Newark school district is not so alarming. Grump (cited by Smith and Handler, 1979) found that only 50% of the teacher's day is usually spent on learning activities in some districts. But since in school 'time is learning', one may ask whether this represents enough instructional time for much needed improvement in student achievement district-wide.

The prediction works much better for the motivational aspect of the teaching learning experience, i.e. the amount of reinforcement (praise, reward) given to pupils by teachers. In this case, and this case only, there is a clear difference between schools: the schools serving the less disadvantaged students put greater emphasis on motivating pupils, than do the schools serving the truly underprivileged. One must point out that this trend is being reversed through the Title I program. Indeed, the higher the Title I enrollment, the more common seems to be the pedagogical practice of rewarding and encouraging students. There is some uncertainty, however, concerning the educational value not of the principle but of the practice. That is suggested by the absence of relationship between the inclination for affective reinforcement and the more academic indices of homework assignment and instructional time. So one must wonder whether 'making pupils feel good' is in actuality an incentive for learning or an alternative to learning.

Summary and Conclusions

In this chapter, a premise has been established that knowledge, as it is reflected in staff training and experience, is one of the most important resources for the task of educating. To find out how this resource is allocated and managed in the Newark school district, certain institutional practices (structural variables concerning the total school) as well as some instructional practices (task processes focusing on the classroom) have been examined. The principal findings are as follows:

1. The schools which serve the neediest pupils tend to have an advantage in personnel quantity, while the schools with a less disadvantaged student population can count on a staff with more diverse skills. Beyond that distinction, the service delivery system is pretty much the same throughout the district.

2. Teacher's status, as far as participation in the decision-making process is concerned, is comparable from school to school. The only difference seems to be in the latitude given to teachers, with more formal or informal training, to organize their class.

3. The amount of time spent on instruction, though comparable from school to school, seems rather limited: less than two-thirds of a teachers' day is fully devoted to learning and instruction.

4. There exists some differences between schools in the district not so much in their instructional approach but mainly in the motivational approach: in schools serving the truly underprivileged children, the practice of rewarding and encouraging pupils seems to be much less common than it is at other schools. However, the pupils enrolled in a special program such as Title I do not seem to be deprived of that affective support.

These findings carry two major implications: a) It would be desirable to make the deployment of qualified staff the object of systematic planning. If not at the district level, at least at the school level, a periodic assessment of staff assignment may be a useful institutional practice. Greater efficiency in the use of the available resources may be the key to greater effectiveness, since this may help the district hit the points of greatest educational need. b) It seems not only desirable, but necessary, to address the issue of classroom management, not only in its instructional aspect but also in its motivational aspect. There is a need to find out in detail what tasks other than instruction are competing for the teacher's time. As stated earlier, if in school 'time is learning', it is important to make it available to teachers, or help them manage it better. At the same time, care must be taken as not to make affective support an alternative to rather than an incentive for learning. Intellectual stimulation is, after all, the key to student achievement.

CHAPTER 4

ORGANIZATIONAL STRUCTURE AND HUMAN DYNAMICS

Perspective

In the preceding chapter, a structural perspective was adopted for the study of school environment, including both institutional and instructional practices. But structural theories of organizations have been criticized for playing down the psychological factors that may influence organizational operation (Argyris, 1972). Various aspects of organizational climate — commitment , job satisfaction, morale — can be legitimately considered not only as the means toward the goal of effectiveness, but as a goal in themselves. Empirical research has supported this view in the teaching-learning context of the school (Walberg, 1970: Oxman & Michelli, 1980).

In the present study, a number of psychological variables have been grouped under the term human dynamics. Human dynamics refers to individual's attitudes toward the task and toward other individuals in the school environment. It is considered as an intervening process between the structural characteristics of the school-organization and the outcome of student achievement. How (or how strongly) each component of the human dynamics impacts achievement is explored later in Chapter VI. For the time being, the interest is directly on teachers' attitudes.

It is important to remember that, in general, an attitude is made of two components: a subjective expression (an opinion) and an objective expression (a behavior that plausibly conforms to the opinion) (see Fishbein, or Merton on this point). Accordingly, a study of student attitude toward the school has to include not only a measure of perceived climate but at least one behavioral index, such as absenteeism. Similarly, for teachers' attitude assessment, one can include an expression of staff morale as well as the behavioral index of absenteeism.

Teachers' Attitudes

Studies of teachers' attitudes toward school and teaching have been popular lately (Coates & Thoresen, 1976; Holdaway, 1978; Kyriacou Sutcliffe, 1971; Oxman & Michelli, 1980). The focal point in many of them -- including Oxman's survey conducted with the Newark school district -- has been on job satisfaction or stress, leading to conclusions about 'burn-out'. There is much to be learned from this research. However, one needs to go a step further in order to clarify certain theoretical and practical points.

There are two main points to be retained from previous studies: a) Job satisfaction is to a large extent a function of professionalism in the school, which includes teachers' training, principal's experience, and administrative support (Miskel, Fevurly, Stewart, 1979). b) Another recurrent finding -- but one that has been played down -- is that teachers often seem to express satisfaction and dissatisfaction at the same time. As indicated in a study sponsored by the American Academy of Family Physicians (1979), teachers report that they like their profession but don't like their job. This paradoxical finding suggests that job satisfaction and commitment, while plausibly related, are not identical and may even be 'out of sync' with one another. Thus, each one deserves to be studied in its own right. While job satisfaction has received much attention, commitment has received comparatively very little.

The present investigation starts with an examination of commitment. To paraphrase the report from the New York State Education Commission, commitment can be defined as dedication on the part of the practitioners (which fosters). . . their own inititive to seek improvement of their skills and to stay abreast of advances in knowledge and practices in their fields. . . (and a willingness) to devote the necessary time to their endeavors (1972, p8). Thus commitment is not to be measured with a single item, but through an array of variables representing professionalism and teacher's attitudes (both opinion and behavior).

Method

The investigation is based on 80% of the public elementary schools in the district (41 out of 52), for which complete data could be collected. The degree of professionalism in a school is represented by four variables: teachers' educational level and experience, principal's educational level and experience. Teachers' attitudes are represented by a job satisfaction score and a measure of absenteeism. The absenteeism index is an avarage of the number of days missed by all classroom teachers in a school, for the 1980-81 year. The satisfaction score is based on three items (see Appendix A) measured, like all the other variables, via questionnaire answers.

A canonical correlation procedure is followed for the data analysis. Canonical analysis is a statistical technique which combines features from regression and factor analyses (Cooley & Lohnes, 1976). In practical terms, the advantage of the procedure is that it allows one to address several questions at the same time. Four specific ones are of interest here:

1. How well can teachers' attitudes be predicted from degree of professionalism in the school? The answer to this question is provided by the canonical correlation coefficient and its corresponding eigenvalue.

2. Are teachers' satisfaction (subjective expression of morale) and attendance (objectives expression of morale) brought about in the same manner? The number of significant canonical variates obtained will indicate whether the two attitudinal aspects belong to the same dimension or not.

3. Which particular component of professionalism or which particular facet of attitude contributes most to commitment? The weight of each variable on the canonical factor(s) will provide the answer to that question.

4. In the Newark school district, is job satisfaction 'out of sync' with commitment to education? This point will be best answered by looking at the sign of the regression-weight for the variable job satisfaction.

Results

The means and standard deviations for the ten variables included in this and the following study are reported in Table 4A. From these figures, one can derive the following information: a) Job satisfaction, while not a critical problem, is yet not very high in the district. The mean of 5.96 on that variable indicates that satisfaction would rate a straight 5 on a scale of 1 to 10. Fifteen to twenty percent of the teaching staff is clearly dissatisfied. Further analysis (from an item analysis not reported here) reveals that each teacher considers him/herself to be in good morale, but does not perceive the rest of the staff as having the same feeling of fulfillment. b) It cannot be determined from the data whether absenteeism is limited to only a segment of the teaching staff. All that can be said is that absenteeism accounts for 12 to 18 days per year, at any given school.

Table 4B presents the matrix of correlations. The intercorrelations among the various measures of staff qualifications have been examined earlier, in connection with the resource allocation study. What is important to notice now is that a) The correlation between satisfaction and attendance is very modest (+.08). b) While the correlation between the attitude variables and any of the qualification indices never exceeds .36, the relationship is much stronger when the two sets of variables are considered simultaneously.

Table 4C gives the details of the canonical analysis. They include: the two canonical correlations, their corresponding eigenvalues, chi-square values. Only one of the canonical functions is statistically significant at the .05 level (chi-square with 8 degrees of freedom, equals 15.4). The canonical correlation coefficient for it is .52, indicating that approximately 27% of the variance in teachers' attitudes is due to professionalism. The pattern of weights in that canonical function is reported in Table 4D. Interpreting this factor as commitment to education, one can see that principal's education level does not contribute in any way to staff commitment (beta = -.09). But principal's experience as well as teachers' training and experience affect it significantly. In the dependent variable set, both job satisfaction and absenteeism show a high (above .65) negative loading on the canonical dimension representing commitment.

TABLE 4A

Means and Standard Deviations for 10 Variables Considered in the Study of Teachers' Attitudes

Variable	Mean	Standard Deviation
Teachers' experience	8.3	.82
Teachers' training	11.1	.81
Principal's experience	5.8	2.28
Principal's training	4.1	.34
Satisfaction	5.9	.99
Absenteeism	14.8	2.85
Staff competence	29.4	2.75
Pupil/teacher ratio	23.8	2.76
Centralization	14.3	5.11
Disadvantaged	81.2	11.79

TABLE 4B

Intercorrelations Among 6 Variables Defining Teachers' Commitment to Education

Variable	2	3	4	5	6
1 - Teach. exp.	.16	.21	-.03	-.36	-.04
2 - Prin. training		-.02	-.03	.09	.08
3 - Prin. exp.			.00	-.08	-.32
4 - Teach. training				-.16	-.28
5 - Absent.					-.08
6 - Satisfaction					

TABLE 4C

Canonical Correlations for 2 Sets of Variables
Representing Teachers' Attitudes and Professionalism

Function	Eigenvalue	Can. Corr.	Chi-Sq.	df	p
1	.27	.52	15.4	8	.05
2	.10	.32	4.0	3	.26

TABLE 4D

Canonical Vector Representing
Commitment to Educators

Variable	Canonical Variate
Teach. exp.	.46
Prin. exp.	.50
Teach. training	.67
Prin. training	-.09
Satisfaction	-.79
Absenteeism	-.67

Discussion

The preceding analysis shows that professionalism is very much at the heart of the teaching staffs' attitudes in a school. Indeed, the teachers with more advanced training, and to a lesser extent those with greater experience, have better attendance records than those with more limited qualifications. Professionalism, as defined here, does not concern only the teachers. It involves also the principal, and a more experienced principal obtains greater behavioral conformity, i.e. better attendance, from his/her staff.

The term behavioral conformity, borrowed from Merton (1959), can be contrasted with attitudinal conformity, i.e. the (subjective) perception of or belief about a situation. What is observed here is that a principal's experience tends to work contrary to teachers' sense of satisfaction. In other words, the principal's characteristics (training or experience) do not bring attitudinal conformity on the part of teachers.

Even more paradoxical is the fact that, in Newark, teachers' expression of job satisfaction is totally 'out of sync' with their own behavior. Indeed, not only is the measure of satisfaction unrelated to absenteeism, but it seems to decrease as professionalism and commitment to education increase. In other words, the most qualified teachers — by education, experience, commitment — are the ones with the deepest feeling of dissatisfaction. This 'love and hate syndrome' may be what is at work to keep opinion and behavior separate: teacher absenteeism is certainly not used as a 'retaliatory measure' inspired by job dissatisfaction.

This kind of internal mismatch may be what is really at the root of the burn-out phenomenon. Burn-out may not be due, as commonly believed, to excessive effort or fatigue. It may well be brought about in situations of internal dislocation, where a person's aspirations remain unfulfilled, despite the greatest commitment.

This view is compatible with the concept of role strain advanced by some social psychologists, notably Goode (1970) and MacKinnon (1978). Role strain can be understood as internal conflict fueled either by uncertainty about one's task or status, or by a mismatch between the demands/options of a job and the resources of the incumbent. Regarding the latter condition, the case most often considered is one in which the demands of the task exceed the person's resources. Here one is faced with almost the reverse situation, wherein the resources are plausibly more than commensurate to the demands of the job. One is therefore led to look for the causes of teachers' dissatisfaction not in intrinsic sources but in extrinsic ones such as the job conditions.

There are a number of factors that contribute to working conditions, including security, salary, work load, physical environment, etc. Each one of them deserves particular attention. Retained here, however, are three variables that involve person to person relationships, i.e. that enter directly into the school's human dynamics. The three variables are: centralization (which may influence teachers' relationship with the principal), pupil-teacher ratio and the proportion of disadvantaged pupils (which may influence the relationships with students). It is then possible to address the following questions:

1. Does a very centralized school structure, which limits teachers' participation in the decision-making process, generate dissatisfaction?
2. Are teachers serving the truly underprivileged more dissatisfied than those teaching at less disadvantaged schools?
3. How is workload, as measured through pupil-teacher ratio, related to dissatisfaction?

The same question can and will be asked regarding teacher absenteeism.

Method

The data comes from the same 41 elementary schools considered earlier. All the variables under examination have been previously discussed. Since it has been shown that professionalism influences both job satisfaction and absenteeism, its impact has to be controlled so it will not contaminate the other variables. Toward that end, an approach similar to an analysis of covariance design has been adopted*: An index of teaching staff competence was first entered into the regression equation of job satisfaction, followed by centralization, workload, and the socio-economic variable (percent disadvantaged). When absenteeism becomes the criterion, job satisfaction itself is aligned with the other independent predictors. It is not that it matters in itself (its zero-order correlation with absenteeism is known to be only .08), but its association with the other predictors could have boosted its significance.

Results

Table 4E presents the correlation among the six variables included in this section. Table 4F presents the details of the regression analysis for the variable job satisfaction. The multiple correlation is equal to .37, resulting in a percentage of variance of .14. Almost 50% of that amount can be attributed to the index of staff competence. The remaining variables contribute each .03 or less to the variance of job satisfaction. In any case, the total F-test result is only 1.49, and is not significant at the .05 level.

The prediction works better for absenteeism. An F-test value of 3.44 is obtained in support of the multiple correlation of .46. This accounts for 22 percent of the variance in absenteeism. More than three-quarters of that value is due to staff competence, which shows a beta of -.40. The variable job satisfaction is the second best predictor, with a beta of -.22. The impact of pupil-teacher ratio is comparable, beta being -.21. The remaining variables, centralization, and proportion of disadvantaged, together do not contribute even one percent of the variance in absenteeism.

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* In analysis of covariance, the principal attribute variable and the covariate must be unrelated. This condition is, in a sense, met here since the various analyses in Chapter 4 show the independence of qualifications from centralization and percent disadvantaged.

TABLE 4E

Intercorrelations Among 6 Variables Related To Teachers' Job Satisfaction and Absenteeism

Variable	2	3	4	5	6
1 - Competence	-.01	.12	.10	-.38	-.23
2 - Centralization		.15	-.02	.02	-.16
3 - P/T ratio			-.32	-.22	-.17
4 - Disadvantaged				.10	-.11
5 - Absent					.09
6 - Satisfaction					

TABLE 4F

Regression of Teachers' Attitude Variables on Characteristics of the Organizational Structure (N = 41)

Dep. Var.	Indep. Var.	R	R^2	beta
Satisfaction	Competence	.23	.05	-.20
	Centralization	.28	.08	+.19
	P/T ratio	.33	.11	-.23
	Disadvantaged	.37	.14	-.18
	(F = 1.48)			
Absenteeism	Competence	.40	.16	-.40
	Satisfaction	.42	.17	-.21
	P/T ratio	.46	.21	-.20
	Centralization	.47	.22	-.03
	Disadvantaged	.47	.22	.02
	(F = 3.44)			

Discussion and Implications

Of the two facets of attitude, teachers' absenteeism is the one that is most directly influenced by working conditions. Work assignment (as seen through the pupil-teacher ratio) and the socio-economic index, although of no great importance on their own, may in combination cause absenteeism to be slightly higher in the schools serving the underprivileged population. Similarly, once professionalism is controlled for, job dissatisfaction leads to absenteeism. This means that a teacher with minimum training or experience, if dissatisfied, will resort to absenteeism. But job dissatisfaction itself is not rooted in any of the three aspects of the working environment examined here. Everything else being equal, the teachers working with underprivileged children do not lack a sense of fulfillment anymore than those teaching a less disadvantaged population. Given the negative relationship observed previously between the variables, principal's experience and teacher's satisfaction, one would hope to clarify that point by showing that centralization also had a (negative) bearing on job satisfaction. But no such trend was observed. What is to be made of the indication of tension/discomfort between teachers and their principal? At this point, it may be easier to say what that problem is not, than to pinpoint what it is: it is not a crisis of confidence related to competence, since it appears to involve qualified and experienced teachers and equally experienced principals; it also is not a 'power play', since centralization or participation in the decision-making process is not an issue. Task scope, or work assignment (as approximated through pupil-teacher ratio) is not apparently a problem. But there may be more to it. When one considers simultaneously its independence from job satisfaction, its relationship to pupil socio-economic status, and the resulting impact on absenteeism, the pieces of the puzzle fit in such a way as to sketch the following picture: the teachers working with the more disadvantaged population, although they may have smaller classes, tend to stay out more often, but it is certainly not out of resentment. Is it then a habit or a pressure valve? If it is simply a habit, corrective action may be necessary; but if it is a pressure-release valve, help or administrative support is what is needed.

CHAPTER 5

ORGANIZATIONAL AND TASK PROCESSES AS DETERMINANTS OF HUMAN DYNAMICS

Organizational processes refer to the continuous actions or operations of organizational members in their accomplishment of goals. Some processes are general, in that they are found in all types of organizations and have to do not only with goal achievement but also with the maintenance of the organization itself. Examples are the processes of administrative supervision, communication, and evaluation, all of which can be viewed as means of coordination and control. Other processes are more specific to a particular type of organization because they have to do with the tasks of the organization. Schools, like hospitals or mental health agencies, are people-processing organizations. Certain actions are performed on people in order to change them from one state of being to another. How they are grouped, how they are treated within those groups, and the degree to which their progress is monitored are all examples of important task processes in people-processing organizations.

The primary purpose of this study is to account for the differences between schools in student achievement. Intervening between the organizational variables and an outcome such as achievement are human factors, including the attitudes and behaviors of both staff and students. Student and teacher absenteeism, the degree of commitment teachers have, the attitudes of students toward their school, and the students' own aspirations are all influenced by organizational structure and process and in turn may influence the achievement of organizational goals.

In this chapter we examine the influence of organizational and task processes on teacher and student attitudes and behaviors, and in the following chapter investigate the relationships between processes, attitudes and behaviors, and student achievement.

I. Human Dynamics: The Dependent Variables

The specific teacher and student attitudes and behaviors which are of interest here include the following:

1. The average number of days of classroom teacher absenteeism in a school for the 1980-81 school year.
2. The average daily student attendance in a school for the month of February, 1981.
3. The degree of teachers' commitment.
4. Students' satisfaction with school, teachers, principal.
5. Students' perceptions of classmates' attitudes about school.
6. Students' own aspirations.

The first two variables were obtained from records in the Deputy Executive Superintendent's office. The student attendance figure was taken directly from the monthly enrollment print-out. Teacher absenteeism had to be calculated by adding the total number of days absent of each classroom teacher and then dividing by the number of classroom teachers in the school. The few cases where teachers were absent for extensive periods (50 days or more) were eliminated from the calculation. The other variables were all measured by questionnaire items, the items having been determined in large part by factor analysis.* (See Appendix A for the specific questionnaire items included in the measurement of each variable.)

The means and standard deviations of the human dynamics variables are presented in Table 5A. Student average daily attendance ranges from 84-91%. Although this figure is for one month only (February, 1981), there is not a great deal of change from one month to another, and, more importantly for purposes of this study, the schools are in similar positions relative to one another, i.e. those that are highest one month tend to be highest in all months, etc. Student satisfaction tends to be slightly below average (5.5 on a 1-10 scale, one being the highest). But student aspirations are high. All students expect to finish high school, and most expect to go to college for a while, at least. This is in contrast to the expectations that teachers have of students (see Chapter 2), in that teachers expected only 50-69% of their students to succeed educationally. (The teacher absenteeism and commitment variables were discussed in Chapter 4.)

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* Factor analysis is a technique by which we can discover the underlying dimension of those questionnaire items which may be measuring the same thing.

TABLE 5A

Means and Standard Deviations of Human Dynamics Variables

	Mean	Standard Deviation
Student Attendance	87.9	3.33
Student Satisfaction	11.55	2.00
Classmate Attitudes	3.48	.70
Student Aspirations	8.73	.40
Teacher Absenteeism	14.8	2.85
Teacher Commitment	5.9	.99

TABLE 5B

Zero Order Correlations of Human Dynamics Variables

Variables	1	2	3	4	5	6
1 - Teacher abs.	1.00					
2 - Student atten.	-.32	1.00				
3 - Teacher commit.	-.16	.25	1.00			
4 - Student satis.	-.02	.38	.54	1.00		
5 - Classmate satis.	.10	.28	.49	.77	1.00	
6 - Self aspirations	.25	-	-.12	-.15	-.07	1.00

As might be imagined, some of these variables are related to each other. Table 5B gives the zero order correlations between the human dynamics variables. The highest correlation is between the students' own attitudes about school and their perceptions of their classmates' attitudes. When students themselves give high ratings to their school, their teachers and their principal, they perceive that their classmates also care about school and school work (correlation = .77).

It is interesting to note that teacher satisfaction and commitment is associated with student satisfaction (.54). That is, students give higher ratings to those schools where teachers feel satisfied with their jobs and perceive that there is a high degree of commitment and pride among the staff.

As far as the relationship between attitudes and behavior is concerned, surprisingly, teacher commitment and teacher absenteeism are not related in any significant way (-.16). However, there is a slight relationship between student satisfaction and student attendance (.38).

The student aspiration variable, as measured by the educational level desired and anticipated by the student, is not related to any of the other variables in any significant way.

II The Independent Variables: Processes

A. General Organizational Processes. Three organizational processes were included in this study and all were measured exclusively by items from the teacher questionnaire (See Appendix A for details).

1. Teachers' perceptions of communication (horizontal and vertical) within the school.
2. Teachers' perceptions of the quality of administrative supervision and support.
3. Teachers' perceptions regarding the type and quality of administrative evaluation.

In a correlation matrix, communication and administrative support were very highly related to one another (.90). When there is such a high correlation among independent variables, it becomes virtually impossible to assess their independent effects. We, therefore, combined them and created a new variable, openness, indicating that in those schools where there is greater communication among the staff and where teachers perceive more support from their administrators there is greater "openness" than in those with less communication and less administrative support.

These processes are means of coordinating and controlling the activities and behavior of organization members. We expected that such means of control would be more effective in schools because of the professionalism of the staff. An alternative means of control would be a reliance on rules and regulations and a more centralized power structure as is characteristic of bureaucratic organizations. Our predictions were that, in those schools which are more open and where there is greater evaluation and feedback, teacher absenteeism would be lower, student attendance would be higher and the morale of both teachers and students would be greater.

The relationships between the organizational process variables and the human dynamics variables are presented in Table 5C below.

TABLE 5C

Standardized Partial Regression Coefficients from Regression of Human Dynamics Variables on Organizational Process Variables

Variables	Teacher Abs.	Student Attend.	Teacher Commit.	Student Satis.	Classmate Satis.	Self Aspiration
Openness	+.07	.14	.78**	.29*	.31*	.09
Evaluation	-.34*	.07	.17*	.16	.16	.08
R^2	.09	.03	.76**	.15*	.17*	.02
N =	46	46	46	46	46	46

* Statistically significant at .05 level.

** Statistically significant at .01 level.

One and/or the other of the organizational process variables has a significant effect on all of the human dynamics variables except student attendance and student aspiration.

The greatest effect is on teacher commitment. Teachers are more satisfied and perceive a greater degree of commitment in those schools which are more open i.e. where there is greater communication and administrative support and, to a lesser extent, greater evaluation. Together these process variables account for 76% of the variation in the commitment variable.

Teacher absenteeism, on the other hand, is related to evaluation but not to openness. Teacher absenteeism is higher where there is less evaluation.

The degree of openness is positively and significantly associated with the students' perceptions of their classmates' attitudes about school. It is also positively related to the students' own satisfactions, but not significantly so. Together, the two organizational process variables account for 15-17% (which is significant) of the variation in these student attitude variables.

B. Task Processes

We initially included in this study two grouping variables, four treatment variables, and one monitoring variable. (as noted earlier, grouping, treatment and monitoring are 3 kinds of important task processes in people processing organizations). Brieflythey are:

1. The degree of heterogenity in grouping
2. The degree of flexibility in grouping
3. The reported percentage of teachers' time spent on classroom instruction
4. Frequency and amount of homework (as reported by teachers)
5. Student's perception of teacher support in terms of rewards, praise, help, etc.
6. Students' perception of teachers' activities - academic or custodial
7. Frequency of monitoring pupil progress

The task processes in schools should reflect the fact that the primary purpose of schools is to educate children and that children are diverse. How children are grouped and treated should take into account our knowledge that learning styles and rates are quite different from child to child. We predicted, then, that more effective schools would have greater heterogeneity and flexibility in their grouping practices, more frequent monitoring of student progress, and greater emphasis on academics with more time being spent on instruction, more homework being given, and more teacher support of students. We expected that such practices would be associated with lower absenteeism and higher morale on the part of both teachers and students.

In a preliminary correlation matrix, the monitoring variable bore very little relationship to either the human dynamics variables or to achievement scores. Given the size of our sample, there is a limit to the number of variables that can be effectively included in one regression equation. We therefore, decided to eliminate monitoring from further consideration.

As seen in Table 5D the task processes are, for the most part, independent of one another. The highest intercorrelation is between flexibility in grouping and instruction time, and the association is positive (.43). That is, in schools with more flexible grouping patterns, there is a greater percentage of time reportedly spent on instruction. The other relationships are too small to be of any significance.

When achievement scores are regressed on the task processes, as shown in Table 5E, the highest association (.83) is between the students' perceptions of teacher support and student satisfaction. In those schools where students perceive that teachers are helpful and reward and praise students for their efforts, students like school better, rate their teachers higher, and also rate their principals higher. Teacher support is also positively and significantly related to students' perceptions of classmates' attitudes (.74), to student attendance (.39), as well as to teacher commitment (.28).

TABLE 5D

Zero Order Correlation of Task Process Variables

Variables	1	2	3	4	5	6
1 - Hetero. group	1.00					
2 - Flexible group	.20	1.00				
3 - Instruction time	-.08	.43	1.00			
4 - Homework	-.14	-.27	-.12	1.00		
5 - Teacher support	-.30	-.03	-.04	.13	1.00	
5 - Teacher activities	-.24	-.20	-.19	.17	-.17	1.00

TABLE 5E

Standardized Partial Regression Coefficients from Regression of Human Dynamics Variables on Task Processes

Variables	Teacher Abs.	Student Attend.	Teacher Commit.	Student Satis.	Classmate Attitude	Student Aspiration
Hetero.	-.03	-.25*	-.11	.18*	.29**	-.22
Flexible group	.14	-.30**	.13	.08	-.11	-
Instructional time	-.05	-.02	.33**	.06	.12	.04
Homework	.20	.04	-	.05	-.10	.11
Teacher support	-	.39*	.28**	.83**	.74**	-.16
Teacher activities	.06	-.12	.09	.11	.18	-.04
R^2	.05	.40**	.27**	.64**	.46**	.06
N =	46	46	46	46	46	46

* Statistically significant at .05 level.

** Statistically significant at .01 level.

Instruction time and teacher commitment are positively related. The more time reportedly spent on classroom instruction, the greater the commitment. Teacher commitment is the only attitudinal or behavioral variable associated with instruction time, however.

The grouping variables are related, but not always in the direction predicted. Greater heterogeneity in grouping and greater flexibility in grouping are both associated with lower student attendance, contrary to our expectations. However, greater heterogeneity in grouping results in higher student satisfaction, which is what we anticipated.

The frequency and amount of homework given and students' perceptions as to whether teachers' activities are primarily academic or custodial are not significantly related to any of the human dynamics variables.

The relationships between the task processes and the organizational processes are minimal (see Table 5F). The highest correlation is between instruction time and communication, and it is a positive correlation (.34), i.e. greater communication is associated with more time spent on instruction. Both administrative support and evaluation are also positively associated with instruction time, but to a lesser extent. Flexibility in grouping practices is positively associated with all three of the organizational processes, but again, the association is not very strong.

TABLE 5F

Zero Order Correlations of Organizational and Task Processes

Variables	Communication	Administrative Support	Evaluation
Homework	-.14	-.08	.04
Hetero. group	.13	.09	.09
Flexible group	.27	.22	.23
Teacher support	.14	.14	.20
Teacher activities	.06	.06	.07
Instruction time	.34	.23	.23

Summary and Discussion

The process variables included in this study do, indeed, have an effect on morale and absenteeism. We distinguished between the more general organizational processes of communicaiton, administrative supervision and support, and evaluation, and the task processes of grouping, treatment and monitoring. Communication and administrative support were too highly correlated with one another to be used as separate independent variables and were, therefore, combined into one variable which we called the degree of openness in the school. The degree of openness is strongly related to the morale variables. (See Figure 5A below for an outline of the significant correlations.) Teacher commitment is especially associated with openness, but, interestingly enough, students' own satisfactions and students' perceptions of classmates' attitudes about school are also significantly related to openness.

FIGURE 5A

General Organizational and Task Processes
Significantly Associated with Human Dynamics

	Teacher Absent.	Student Attend.	Teacher Commit.	Student Satis.	Classmate Attitude	Student Aspiration
General Organizational Processes	Evaluation (-.34)		Evaluation (.17)			
			Openness (.78)	Openness (.29)	Openness (.31)	
Task Processes		Hetero. group (-.25)		Hetero. group (.18)	Hetero. group (.29)	
		Flexible Group (-.30)				
		Teacher Support (.39)	Teacher Support (.28)	Teacher Support (.83)	Teacher Support (.74)	
			Instruction Time (.33)			

Since the openness variable is being measured through teacher perceptions, it makes sense that teachers are more satisfied in schools where they perceive greater communication and greater administrative support. The fact that students, also, are more satisfied in such schools attests to the pervasiveness of morale. Since students are the clients of the organization and thus are more transitory than teachers, in terms of cause and effect, student satisfaction is affected by teacher morale. Whatever it is, then, which makes teachers more satisfied (in this case degree of openness) will also make students more satisfied.

Attitudes and behavior, however, are two different things. Morale is not related to absenteeism on the teachers' part and only slightly related in the case of students. Although the degree of openness is strongly related to morale, it is not associated with behavior. Neither teacher absenteeism nor student attendance is affected by openness in the school.

The extent to which teachers are evaluated through various monitoring and feedback activities, is related to both morale and absenteeism - on the part of teachers only. The association between evaluation and teacher commitment is a positive one. Commitment is higher with more frequent evaluation. Absenteeism is lower with more frequent evaluation. Administrative evaluation in the form of classroom visits, performance feedback, etc. implies a concern for academic rigor. Teachers apparently respond positively to such serious administrative concern.

Although the degree of openness is the stronger determinant, the two organizational process variables together account for a large percentage (75%) of the variation in teacher commitment. To enhance teacher morale we can safely advocate the increase in communication within the school, greater administrative support of teachers, and more frequent evaluation.

Evaluation is the only process variable included here which is associated with teacher absenteeism, and it does not explain very much of the variation in absenteeism. There are obviously determinants of absenteeism other than the process variables.

The task processes are associated with teachers' and students' morale and with student attendance. The processes which have the greatest explanatory powers are the grouping and treatment variables. Monitoring of student progress was not associated with any of the human dynamics variables nor with achievement and was eliminated from further consideration early in the analysis.

The strongest relationships are between the students' perceptions of teacher support and students' satisfactions - both their own and their perceptions of their classmates. Student attendance and teacher commitment are also related to this treatment variable. In those schools where students perceive that teachers help students and praise and reward them for their efforts, students like their school and their teachers better, feel their classmates care more about school and school work, and have higher attendance rates. Insofar as student perceptions are indicators of reality, clearly how students are treated in the classroom affects their morale and, to a lesser extent, their attendance.

Teacher satisfaction and commitment is higher in those schools where students feel that teachers are more supportive. Teacher satisfaction and commitment is also positively related to the amount of time spent on classroom instruction (as reported by the teachers). Although in our regression equations the morale variables are the dependent ones, meaning that they are affected by the task process variables, it is quite possible that in this case a positive commitment on the part of teachers precedes their classroom behavior. In any event the two are related. We would advocate trying to get teachers to spend more time on instruction and to use positive reinforcement techniques (praise, rewards) rather than trying to enhance their commitment, since it is the behavior, rather than the attitude, which is more strongly related to achievement.

The other task process variables related to morale and absenteeism are the variables having to do with the way students are grouped. Student satisfaction is higher in those schools which have more heterogeneous ability grouping. Perhaps this is because children avoid getting labled in negative ways under such grouping practices.

Although heterogeneous grouping has a positive effect on student morale, it has a negative effect on student attendance. Further, those schools which have more flexible grouping practices also have lower student attendance. This finding is contrary to our expectations and we can only speculate as to reasons. One possiblilty is that there are other factors influencing the relationship. We shall explore this possibility further in the next chapter.

Two of the task processes, the homework variable and the variable concerning students' perceptions of teachers' academic or custodial activities, were not significantly related to any of the human dynamics variables. These treatment activities are less personal than those having to do with help, praise and reward, and obviously do not have the effect on either morale or absenteeism that the more personal activities do.

Two of the human dynamics variables, teacher absenteeism and students' educational aspirations, are not affected by any of the task processes. Since these processes have to do with the grouping and treatment of students, it is not surprising that teacher absenteeism is unaffected by them. We did think that students' aspirations would be affected, but perhaps such aspirations at this level (6th grade) are more dependent on home background factors. Going to college or not is a subject of discussion and a salient concern among peers and between teachers and students in high school, but probably it is not a subject of discussion or concern in elementary school. Therefore, whatever a student thinks comes from the home.

Conclusions and Recommendations

As stated at the beginning of this chapter, this study focuses on student achievement. The human dynamics variables are viewed as *intervening* variables. That is, they intervene between the structure and processes of the organization and achievement. However, morale and absenteeism can also themselves be viewed as outcomes. It is probably desirable on the part of school administrators to reduce absenteeism and enhance morale - regardless of whether or not absenteeism and morale affect achievement.

The results of our analysis suggest that teacher morale is greatly affected by the amount of communication - among the teaching staff and between teachers and administrators - and the degree of administrative support that exists within the school. Thus, if teacher morale is to be improved a more "open" atmosphere must be created by the school administration.

Student morale is greatly affected by the degree to which teachers help students and use such positive reinforcements as giving praise and other rewards for student effort. To increase student morale, the teachers need to be more cognizant of the personal way they treat their students and direct that treatment toward greater supportiveness. Such behavior should also result in higher student attendance.

Administrative evaluation is related to teacher absenteeism. The message here is that when administrators keep closer tabs on teachers (through classroom visits, etc.), absenteeism is reduced. However, the *degree* to which this behavior affects absenteeism is not very great. Factors other than those included in this chapter have a greater effect on teacher absenteeism.

CHAPTER 6

ORGANIZATIONAL PROCESSES, HUMAN DYNAMICS AND STUDENT ACHIEVEMENT

The organizational processes outlined in Chapter 5 were expected to have both direct and indirect effects on achievement. By direct effect we mean that the particular activity, e.g. amount of time spent on instruction, will have a direct impact on achievement, such that a change in the activity would result in a change in achievement. If teachers begin to spend more time on instruction, student achievement will rise.

If a particular process variable affects one or another of the human dynamics variables which, in turn, directly affects achievement, that process variable would have an indirect effect on achievement. For example, the degree of openness in the school may not be directly related to achievement, but it is related to morale, and if morale is related to achievement, then openness would have an indirect effect on achievement.

In this chapter we examine the relationships between the process variables, the human dynamics variables, and student achievement.

I. Direct Effects of Process and Human Dynamics Variables

A. General Organizational Processes and Achievement

The central argument of this study is that how the school functions as an organization will influence its degree of effectiveness. We are measuring effectiveness in terms of student achievement scores on reading and math tests, because teaching children these basic skills is one of the primary goals of elementary schools. Coordination and control are necessary for the effective achievement of organizational goals. Through one or another means of coordination and control, the conformity of organizational members to the goals of the organization is ensured. Because teachers are professionals, their conformity to the goals of the school (teaching basic skills) is better obtained through such means of control as communication, evaluation and administrative support, rather than rules or regulations or a highly authoritarian type of administration. Student achievement, then, should be higher in schools which rely on those kinds of control mechanisms. However, as can be seen in Table 6A, this prediction turned out to be without substance.

As the reader may recall, openness is a combination of the communication and administrative support variables. Although all of the correlations are positive, none is significant. Further, the amount of variation in achievement explained by these variables is small indeed and also is not significant. Thus as far as their direct effects on achievement is concerned, the impact is minimal. Later, we shall explore their indirect effects.

B. Task Processes and Achievement

Professionally organized schools are more academic than custodial. As discussed earlier, the grouping practices and treatment activities in such schools should reflect an academic emphasis and a recognition that children are different. The degree of academic activity should be positively related to achievement. We predicted, then, that more time spent on instruction, more homework, and more teacher support for student effort would result in higher achievement. We also expected that greater heterogeneity in grouping and more flexible goruping practices would be associated with higher achievement. When there is greater heterogeneity, children avoid negative labels. This is especially true regarding heterogeneity between classrooms. Flexibility in grouping means that children do not get locked into particular groups. When success occurs, a child can move to a different group, and there are a sufficient number of ability groups within a classroom to make such movement easy. Table 6B presents the correlations between the grouping and treatment variables and student achievement.

The task processes included here affect sixth grade scores only. The reported amount of instruction time and amount and frequency of homework are positively and significantly related to both reading and math achievement, with instruction time being the stronger determinant. Teacher support, as perceived by students, is also positively related to achievement, significantly so for sixth grade math achievement.

TABLE 6A

Standardized Partial Regression Coefficients from Regression of Achievement Scores on General Organizational Process Variables

Variables	Read 6	Math 6	Read 3	Math 3
Openness	.23	.05	.07	.10
Evaluation	.13	.22	.19	.19
R^2	.09	.06	.05	.07
N =	43	43	52	52

TABLE 6B

Standardized Partial Regression Coefficients from Regression of Achievement Scores on Task Processes

Variables	Read 6	Math 6	Read 3	Math 3
Flexible group	-.40**	-.43**	.15	.08
Hetero. group	-.05	.05	-.03	-.02
Instruction time	.41**	.42**	.04	-
Homework	.26*	.24*	-	.08
Teacher support	.17	.24*	.08	.24
Teacher activities	-.12	-.05	.02	.11
R^2	.31*	.31*	.04	.07
N =	43	43	47	47

* Statistically significant at .05 level.

** Statistically significant at 01. level.

The fourth treatment variable, students' perceptions of teachers' academic vs. custodial activities, is not related to achievement.

As far as the grouping variables are concerned, the degree of heterogeneity in grouping is not related to achievement. Flexibility in grouping is related, but in the direction opposite that predicted. Achievement scores are higher in schools with less flexibility. As noted in Appendix A, three questions in the principals' questionnaire were included in the measurement of this variable: the number of ability groups in the classroom, whether or not children can move between groups, and the basis for grouping. In looking through the questionnaires we noted that there was variation in response to only one of those questions, the one having to do with the number of ability groups in the classroom,

Most principals responded that children can move from group to group and that the basis for grouping is a combination of test scores and teacher judgement. Therefore, to be more accurate, the correlation here should state that in those schools where principals indicate that there are more ability groups within a classroom, achievement is lower than in schools with only two ability groups in the classroom. One possible explanation for this unexpected correlation is that there may be greater homogeneity in ability in the higher achieving schools and thus there would be fewer ability groups. There is some correlation between this grouping variable and the percentage of disadvantaged students in a school (zero order correlation is .32) ,such that the greater the percentage of disadvantaged students the more ability groups per classroom. If we include the percentage of disadvantaged students in the regression equation, the correlations between flexibility in grouping and sixth grade achievement drop to -.25 (reading) and -.22 (math). These are still significant relationships but the correlations are not nearly as high.

The task process variables together explain about a third of the variation in sixth grade achievement, thus they are influential. Three of the significant variables have to do with teacher behavior in the classroom. Spending more time on instruction, giving homework, being helpful to students, and rewarding them for their efforts, are all activities which have pay-offs in terms of higher student achievement.

Third grade scores are not influenced by these process variables. In the case of homework, it is probable that third graders do not receive much homework and thus would not be affected by this variable. As far as student perception of teacher support is concerned, the students who responded to the questionnaire were primarily sixth grade students. Perhaps they were referring to their own teachers or to other sixth grade teachers rather than to teachers in general (as asked on the questionnaire). If so, then it is conceivable that other teachers in the school, e.g. third grade teachers, are less supportive. One would assume that amount of time spent on instruction would be important at all levels. It may be simply that because sixth graders have been in school longer, the effects of school related variables are greater.

C. Human Dynamics and Achievement

Organizations are made up of people. In order for students to do well on achievement tests, teachers have to teach; students have to learn. This requires, at the very least, that they each be there. Attendance is important. Further, motivation is also important for each to do his/her job well. Motivation is generally related to morale or satisfaction. These human factors need to be considered when assessing the influence of organizational structure and process on an outcome such as achievement. We anticipated that both attendance and morale would be positively related to achievement. We wished to test the extent to which this is so, and whether students' attendance and morale were more important than teachers'.

As Table 6C below reveals, all of the human dynamics variables are associated with one or another of the achievement indicators. Attendance is a stronger determinant than morale. Students' attendance is more crucial than teachers' at the sixth grade level. At the third grade level, teacher absenteeism is important.

The student satisfaction variable is highly correlated (.77) with the students' perceptions of classmates' attitudes toward school. This high correlation presents problems when trying to assess their independent effects. If we combine these two variables into a general student morale variable, there is a significant correlation with math achievement at both the sixth and third grade levels, but not with reading scores.

TABLE 6C

Standardized Partial Regression Coefficients from Regression of Achievement Scores on Human Dynamics Variables

Variables	Read 6	Math 6	Read 3	Math 3
Teacher absent.	-.13	-.22*	-.28*	-.32**
Stud. attend.	.45**	.50**	.31**	.17
Teacher commit.	.23*	.02	.15	-.03
Student Satis.	.05	.19	-.03	.16
Student aspir.	.29**	.15	.09	-.02
Classmate att.	.03	.29**	-.04	.26
(Student morale)	(.08)	(.25)**	(-.03)	(.39)**
R^2	.47**	.53**	.28**	.35**
N =	42	42	46	46

*Statistically significant at the .05 level.

**Statistically significant at the 01. level.

Learning math skills can be tedious. Having a good feeling about the school and teachers within the school may help get students through the repetitiousness required.

Student aspiration on the other hand is positively associated with reading achievement only, and at the sixth grade level only. Teacher commitment is also positively related to sixth grade reading achievement only. Student aspiration is measured by two questions having to do with the educational level desired and anticipated by the student. Higher student aspirations and greater teacher commitment may be associated with reading achievement only because reading is a more complex activity and therefore requires greater motivation. The teachers' willingness to explore alternatives in order to be more effective in the teaching of reading skills may depend upon his/her degree of commitment to education. Similarly, the students' efforts to learn reading skills may be motivated by his/her ultimate aspirations.

D. Summary of Direct Effects

Figure 6A summarizes the above discussion. The task processes associated with achievement are: the amount of time spent on instruction, the frequency and amount of homework, students' perception of teacher support, and the degree of flexibility in grouping. The first three are treatment variables, having to do with teacher behavior in the classroom. In those schools where the average amount of time reportedly spent on instruction is higher, where teachers indicate that they give homework more frequently and in greater amounts, and where students report that teachers are more helpful and reward and praise students more, student achievement is higher. These variables are independent predictors of achievements i.e. in this sample they are not necessarily found in the same schools.

The fourth task process variable associated with achievement is a grouping variable. Schools vary in terms of the number of ability groups within a classroom. The relationship is contrary to our predictions in that achievement is higher in schools with fewer ability groups in the classroom. Part of the explanation lies in the relationship

FIGURE 6A

Task Process and Human Dynamics Variables Significantly Associated with Student Achievement

	Read 6	Math 6	Read 3	Math 3
Task Processes	Instruct. time (.41)	Instruct. time (.42)		
	Homework (.25)	Homework (.24)		
		Teacher support (.24)		
	Flexible group (-.40)	Flexible group (-.43)		
Human Dynamics	Student attend. (.45)	Student attend. (.50)	Student attend. (.31)	
		Teacher abs. (-.22)	Teacher abs. (-.28)	Teacher abs. (-.32)
	Teacher commit. (.23)			
	Student aspir. (.29)	Student morale (.25)		Student morale (.39)

between this variable and the percentage of disadvantaged students. The greater the percentage of disadvantaged students in a school, the more ability groups there are in classrooms - which reflects a more heterogeneous population. The percentage of disadvantaged students is negatively related to achievement.

All of the human dynamics variables are associated with achievement, with student and teacher attendance having the strongest effects. Teacher commitment and student aspirations are both related to sixth grade reading scores, perhaps due to the greater motivation required to master this skill. Student morale is positively associated with math scores only. We suggested that high morale may offset the repetitiousness necessary for learning math.

The relationships between all the variables and achievement are primarily at the sixth grade level. (One notable exception is teacher absenteeism, where the correlations are higher at the third grade level). A possible reason for this is that sixth graders have been in school longer and thus have been more exposed to the influence of school variables. The determinants of third grade achievement may lie elsewhere.

The combined task process variables account for 31% of the variation in sixth grade achievement. The human dynamics variables explain as much as 47 and 53% of the variation in sixth grade scores and 28 and 35% of the variation in third grade scores. The direct effects of these task process and human dynamics variables on achievement are thus noteworthy.

E. Socioeconomic Status and its Influence

As stated in the introduction to this study, the relationship between student socioeconomic background and achievement has been well documented. We have deliberately excluded socioeconomics status from consideration up to this point in order to highlight those organizational variables which are significantly related to achievement. However, there are socioeconomic variations among the elementary schools in Newark, and we need to know if, and to what extent, the socioeconomic factor influences the relationship between the organizational variables and achievement.

The percentage of economically disadvantaged students in a school is our measure of socioeconomic status. It was calculated by dividing the average number of free lunches served per day by the average daily attendance (for the month of February, 1981). The mean is 82.0% and the standard deviation is 11.5.

The zero order correlations between the percentage economically disadvantaged and the task processes are small, the largest being with flexibility in grouping (.32). We do not anticipate, then, that when the percentage economically disadvantaged students is included in the task process equation, there will be any great change in the correlations between the task processes and achievement. As seen in Table 6D, this is, in fact, true - with the exception of flexibility in grouping. The correlations are lower between flexibility in grouping and achievement as a result of the socioeconomic variable. As we noted earlier, part of the reason for the original high negative correlation between flexibility in grouping and achievement was due to the positive relation between flexibility in grouping and the percentage economically disadvantaged. The correlations between instruction time and achievement and between homework and achievement are about the same as they were without the socioeconomic variable. Thus, we can safely conclude that these processes have an independent effect on achievement The R^2 is considerably higher in this table than when the task processes were considered alone because the socioeconomic variable itself is highly correlated with achievement. Thus, when it is included in the equation, it adds to the explanatory powers of the total equation.

The story is a bit different when we look at the zero order correlations between percentage of economically disadvantaged and teacher expectations, teacher absenteeism, student attendance, and student morale.* As seen in Table 6E, the only

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* Teacher expectations was the "goals and expectations" variable most significantly related to achievement. The other variables included here are the significant "human dynamics" variables.

TABLE 6D

Standard Partial Regression Coefficients from Regression of Achievement Scores on Task Processes and Percentage of Economically Disadvantaged Students (Sixth grade only)

Variables	Read 6	Math 6
Pctdisad.	-.46**	-.[illegible]5**
Instruction time	.38**	.3[illegible]**
Homework	.25**	.23**
Flexible group	-.26**	-.23*
R^2	.48**	.56**
N	43	43

TABLE 6E

Zero Order Correlations of Human Dynamics Variables Plus Teacher Expectations and Percentage Economically Disadvantaged

Variables	1	2	3	4	5
1 - Pct. disad.	1.00				
2 - Teacher expect.		-.43	1.00		
3 - Teacher absent.		.11	-.50	1.00	
4 - Student attend.		-.60	.53	-.25	1.00
5 - Student morale	-.37	.32	.09	.32	1.00

TABLE 6F

Standardized Partial Regression Coefficients from Regression of Achievement Scores on Human Dynamics Variables Plus Teacher Expectations and Percentage Disadvantaged

Variables	Read 6	Math 6	Read 3	Math 3
Pct. disadv.	-.20	-.30**	-.20	-.41**
Teacher expect.	.27	.04	.29	-.01
Teacher absent.	.01	-.18	-.10	-.27*
Student attend.	.29*	.38**	.13	-.06
Student morale	.02	.17	-.18	.23
R^2	.42**	.54**	.27*	.33**
N =	42	42	45	45

*Statistically significant at the .05 level.
** Statistically significant at the .01 level.

variable not related to percentage of economically disadvantaged is teacher absenteeism. Teacher absenteeism is, however, related to teacher expectations. In schools where there is a larger percentage of economically disadvantaged students, student attendance is lower, student morale is lower, and teacher expectations are lower. In schools with higher teacher absenteeism, teacher expectations for students are lower.

When percentage of economically disadvantaged is included in a regression equation with these variables (see Table 6F), their independent effects on achievement are lessened. Student attendance continues to be of significance, as does teacher absenteeism in the case of third grade math. Although the teacher expectations variable has higher correlations with reading scores than does the socioeconomic variable, the correlations are not statistically significant. The positive correlations between student morale and math achievement are also not statistically significant. This is no doubt in part due to the small sample size and to the high intercorrelations among these variables. Both condititons make it very difficult to adequately sort out the independent effects of the variables. We think, though, that those schools which have higher percentages of disadvantaged students are in a double bind. The socioeconomic variable is itself negatively associated with achievement, but along with it comes lower teacher expectations, lower student attendance and lower student morale, all of which are also associated with lower achievement. Thus, extra efforts have to be made in such schools.

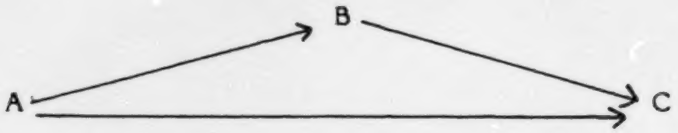
II. Indirect Effects of Process Variables

A. General Organizational Processes

The degree of openness in the school is not significantly related to student achievement directly. However, the degree of openness is very highly related to the morale variables, especially teacher commitment. Teacher commitment, in turn, is related to sixth grade reading achievement. The degree of openness is also related to teacher expectations (.39). The teacher expectations variable is related to achievement. It would seem, then, that the effect of openness on achievement may be an indirect one, rather than a direct one. To test this idea we used a path model, as shown in Figure 6B below.

FIGURE 6B

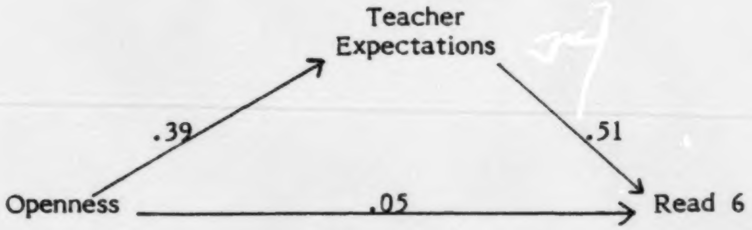
Path Model to Assess Direct and Indirect
Effects of a Variable



The causal ordering of variables is such that a affects B which affects C. In addition A may have some direct effect on C. Since teacher expectations had a stronger effect on achievement than commitment, we will use it in this model. The results are shown in Figure 6C.

FIGURE 6C

Direct and Indirect Effects of Openness
on Student Achievement



zero order correlation = .25

$R^2 = .28^*$

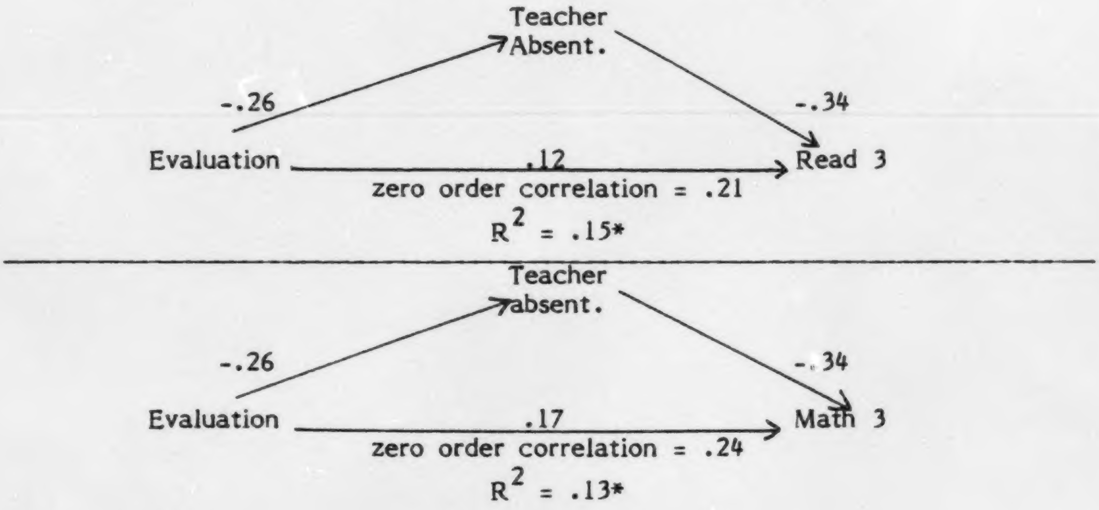
*Statistically significant at .01 level.

The zero order correlation between openness and sixth grade reading is .25. Of that number .05 is due to the direct impact of openness on achievement, and .20 is due to its indirect impact (.39 x .51), i.e. through its relationship to teacher expectations. The relationship between openness and teacher expectations is significant, as is the relationship between teacher expectations and student achievement, but the direct relationship between openness and student achievement is not significant. The message, is, then, that the organizational process variable, openness, which includes the amount of communicaation among staff members and the extent to which teachers perceive support from administrators, influences teachers' expectations of students which, in turn, influences student achievement.

The frequency and type of evaluation of teachers in the school is negatively related to teacher absenteeism. Teacher absenteeism is negatively related to achievement. Evaluation, then, may have an indirect effect on achievement through its effect on teacher absenteeism. Figure 6D illustrates the relationships using third grade reading and math scores, since the relationships between teacher absenteeism and achievement were higher at the third grade level.

FIGURE 6D

Direct and Indirect Effects of
Teachers' Evaluation on Student Achievement



* Statistically significant at .05 level.

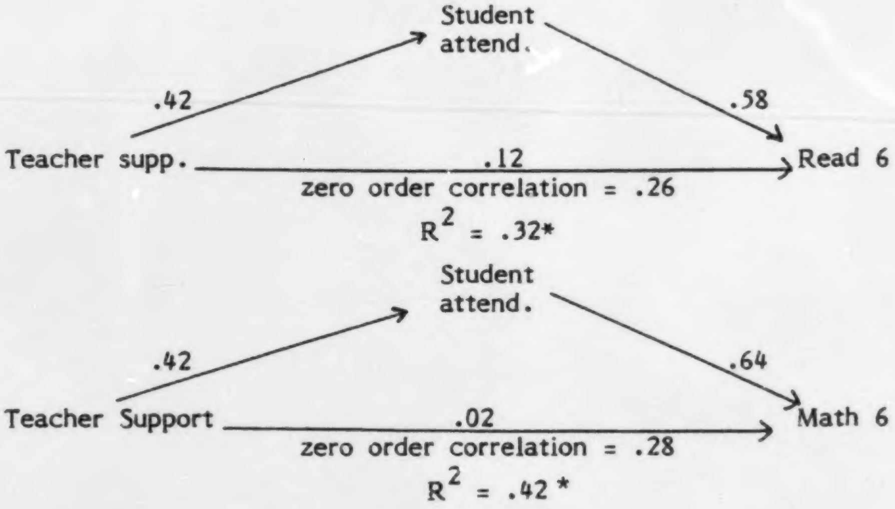
The zero order correlations between evaluation and student achievement are .21 for reading and .24 for math. Here, the indirect impact of the process variable is less than the direct impact (.12 is direct, .09 is indirect for 3rd grade reading; .17 is direct, .07 is indirect for math). Although the R^2 is significant, the amount of variation in achievement accounted for by these two variables is not large. Evaluation, then, has some influence on achievement, through a combinaton of its direct and indirect effects, but the influence is not very great.

B. Task Processes

The task process variable which was related to both teacher and student morale and student attendance was student perceptions of teacher support. Student attendance was highly correlated with student achievement, particularly at the sixth grade level. Figure 6E shows that almost all of the influence of the teacher support variable on achievement is through its influence on student attendance. Further, the R^2 is fairly large, so that these variables have a major impact on achievement. If students perceive that their teachers help them and reward them, they are more likely to be diligent in their attendance and thus will do better. Teacher support, as seen through the eyes of students, is an important factor in the effectiveness of the school.

FIGURE 6E

Direct and Indirect Effects of Students' Perception of Teacher Support on Student Achievement



* Statistically significant at .05 level.

C. Summary of Indirect Effects

Two of the process variables, the degree of openness in the schools and the degree of teacher support given to students, have an impact on student achievement indirectly, rather than directly, because they are each related to other variables which are major direct determinants of achievement. The degree of openness positively influences the level of teacher expectations. In schools where there is greater communication and more administrative support of teachers, teacher expectations for student achievement are higher. When teacher expectations are higher, students do better.

Teacher support influences student attendance. In schools where students perceive that teachers are helpful, students' attendance is higher. When student attendance is higher, students do better.

The third process variable whose indirect effects were assessed, the frequency of teacher evaluation, was not as influential. Although it does have an effect on teacher absenteeism and teacher absenteeism is related to student achievement, the total effect on achievement is less than the above combinations. Improving teacher evaluation, then, would have *some* impact on student achievement, but minimally so.

Conclusions and Recommendations

Improving communication within the school, so that teachers not only share ideas among themselves but feel free to talk to administrators, and increasing administrative support of teachers will ultimately have positive outcomes for student achievement. These organizational processes, the coordination and control of activities and people within the school, do not have a direct impact on student achievement. However, they do affect both the morale and expectation level of the staff, and both of these variables do impact on student achievement. These proceses are, thus, *indirect* determinants of achievement.

The task processes of the school, especially those concerning the treatment of students, affect student achievement. Specifically, those schools which have higher average amounts of time reportedly spent on classroom instruction (as opposed to discipline, administrative duties, etc.) have higher achievement scores. Those schools where teachers say they give more homework and give it more often also have higher achievement scores. Clearly, time on task has a direct effect on student achievement.

In those schools where students perceive that teachers are supportive, in terms of being helpful and using praise and rewards for student effort, student attendance and student morale are higher, and both of these variables, especially student attendance, directly impact on student achievement. Thus, teachers' interpersonal skills in the classsroom are also important, but as an indirect determinant of achievement.

Another variable which has an effect on achievement is teacher absenteeism, one of the human dynamics variables included here. Common sense tells us that teachers need to be present for the teaching-learning process to occur. Sometimes common sense and social science results are the same, sometimes not. In this case they are. The next question is, what is it that affects teacher absenteeism. The degree of openness in the school, which is highly related to morale, is not related to absenteeism. There is some relationship between the frequency of evaluation and absenteeism, but the correlation is not high. Thus, there will be some pay-off in increasing evaluation activities, both in terms of reducing teacher absenteeism and ultimately raising achievement scores, but the pay-off will be small.

The student socioeconomic status variable, the percentage of disadvantaged students, has a negative association with achievement, as well as a negative association with student attendance, student morale, and teacher expectations. Thus, when the socioeconomic status variable is controlled for, the effects of these variables on achievement are lessened. Given the high intercorrelations among these variables, as well as the small sample size, we cannot adequately determine the extent of their independent effects. It is clear, however, that schools which have higher percentages of disadvantaged students have other disadvantages as well, and the total package has a very negative impact on student achievement.

Based on the results of our analysis in this chapter, to improve student achievement:

1. Administrators should be encouraged to be supportive of teachers and to create an atmosphere of and opportunities for open communication within the school.
2. Teachers should be encouraged to maximize time spent on instruction.
3. There should be a homework policy such that all teachers give adequate amounts of homework.
4. The use of positive reinforcement techniques in the classroom, appropriately tied to student effort, should be emphasized.
5. There should be more frequent evaluation of teachers, in the form of classroom visits, performance feedback, and both formal and informal contact.
6. Efforts should be made, either through above means or more directly, to increase both teacher and student attendance.

APPENDIX A

Items Used to Measure Variables

TQ = Teacher Questionnaire
SQ = Student Questionnaire
PQ = Principal Questionnaire

Organizational Variables

Goals and Expectations

1. Goal Articulation

   a) The schools goals and objectives are clearly defined. (TQ 60)

   b) To what extent do you think the principal has definite ideas about how instruction should be provided to students? (TQ 39)

2. Principal's Articulation of Goals

   a) Do you have definite ideas about how instruction should be provided to students? (PQ 27)

3. Principal's Academic Orientation

   From the following pairs of items, choose the statement with which you most strongly agree:

   a) The biggest problem with students today is that they do not respect authority.

      The biggest problem with students today is that they are not interested in learning. (PQ 28)

   b) The major difficulty with urban schools is that there is a lack of discipline.

      The major difficulty with urban schools is that too many students can not learn to read and write well. (PQ 30)

   c) A larger percentage of the school budget should be allocated toward improving instructional services.

      A larger percentage of the school budget should be allocated toward maintaining order in the school buildings. (PQ 31)

4. Student Perception of Teacher Expectations

   a) Most of the teachers that I know in this school don't care how hard the student works as long as he or she passes. (SQ 31)

   b) It is important to teachers in this school that their students learn their school work. (SQ 21)

5. Teacher's Expectations of Students

   a) On the average, what level of achievement can be expected of students in your class? (TQ 32)

   b) What percentage of students in your class do you expect to finish high school? (TQ 43)

   c) What percentage of students in your class do you expect to attend college? (TQ 44)

   d) From your observations, what percentage of teachers in this school believe that all of their students can achieve minimum basic levels of competence in reading and math? (TQ 45)

6. Teachers' Perceptions of Principal's Expectations

   a) How many students in this school do you think the principal expects to complete high school? (TQ 41)

   b) What percentage of the students in this school do you think the principal expects to attend college? (TQ 42)

7. Principal's Expectations of Students

   a) On the average, what achievement level can be expected of the students in this school? (PQ 18)

   b) What percentage of the students in this school do you expect to complete high school? (PQ 19)

   c) What percentage of the students in this school do you expect to attend college? (PQ 20)

   d) What percentage of the students in this school do you feel are capable of learning to read by the end of the second grade? (PQ 21)

8. Principal's Perception of School Achievement Goals

   a) With regard to student achievement, how good a school do you think this school can be, compared to others in the district? (PQ 11)

Structure

1. Centralization

   a) In selecting basic instructional materials, school administrators make the decision with no input from teachers. (PQ 36)

   b) In planning programs for the entire school, decisions are made by school administrators and teachers jointly. (PQ 37)

c) In evaluating school programs, decisions are made by school administrators after getting input from teachers. (PQ 38)

d) In general when changes are to be made which affect your job, how much input do you have? (TQ 21)

e) In planning programs for the entire school, decisions are made by school administrators and teachers jointly. (TQ 67)

f) In evaluating school programs, decisions are made by school administrators after getting input from teachers. (TQ 68)

2. Formalization - Job Codification

a) Teachers are required to follow an adopted course of study. (TQ 50)

b) Uniform grading procedures are required. (TQ 65)

c) To what extent do the upper elementary teachers, 3 - 8 grades, individualize the instructional programs for their students? (PQ 19)

3. Complexity - Teachers' Experience

a) How long have you taught at a public school? (TQ 1)

b) How long have you taught at this school? (TQ 2)

4. Complexity - Teachers' Training

a) Indicate your level of professional training? (TQ 4)

b) Indicate the time of your most recent training in each of the following:

College Courses
Other Professional Training (TQ 5 and 6)

5. Complexity - Principal's Experience

a) How long have you been a principal? (PQ 4)

b) How long have you been a principal at this school? (PQ 5)

6. Complexity - Principal's Training

a) Indicate your level of professional training. (PQ 6)

7. Complexity - Number of occupational specialists in a building (non-classroom professionals) (from records)

8. Task Scope - Pupil/teacher Ratio

   a) Pupil/teacher ratio (from records), calculated by dividing average pupil enrollment by number of classroom teachers.

9. Task Scope - Title I Students

   a) Percentage of Title I students (from records).

Processes

General Organizational Processes

1. Communication

   a) To what extent do the customs and norms of your school encourage the sharing of ideas among teachers? (TQ 15)

   b) To waht extent does your school utilize a team oriented approach to problem solving? (TQ 16)

   c) The school's communication network is open to effective two-way exchanges among administrators and teachers. (TQ 63)

2. Evaluation

   a) How often does an administrator in this school visit your classroom? (TQ 23)

   b) How often are teachers provided with feedback about their professional performance? (TQ 24)

   c) How often do you have formal or scheduled professional contact with others in your school? (TQ 25)

   d) How often to you have informal or unscheduled professional contact with others in your school? (TQ 26)

   e) Is teacher's assignment of homework monitored by administrators in your school? (TQ 27)

   f) How often do you suggest ways of improving student achievement to your teachers? (PQ 26)

3. Administrative Supervision and Support

   a) How would you rate the administrative supervision that you get? (TQ 10)

   b) How adequate is the assistance and support given by administrators to teachers in this school on strategies for improving students' academic achievement? (TQ 22)

   c) To what extent do you feel free to talk over job problems with your principal? (TQ 28)

   d) The school's administrators understand the needs of teachers. (TQ 61)

   e) To what extent is your school's administration interested in motivating staff by encouraging and supporting them? (TQ 20)

Task Processes

1. Instruction Time

   a) Approximately what percentage of a typical day do you spend on each of these activities? (TQ 40) (percent of time on instruction)

2. Frequency and Amount of Homework

   a) How much homework do you give students each week? (TQ 37)

   b) How often do you assign homework? (TQ38)

3. Heterogeneity of Grouping

   a) In general, how are students in the same grade level assigned to different classes within the school? (TQ 35)

   b) In general, how do you group the students within your class? (TQ36)

4. Flexibility in Grouping

   a) If there are different ability groups within the classroom, how many groups, on the average, are there? (PQ 14)

   b) During the course of the year, is it possible for children to move from one group to another, depending on their performance? (PQ 15)

   c) If children are grouped by ability in your school (either within the classroom or between classrooms) what determines the group in which a child is placed? (PQ 16)

5. Students' Perceptions of Teacher Support

   a) Teachers in this school try extra hard to help students. (SQ 24)

   b) In this school there are lots of rewards given to students who get good grades. (SQ 25)

   c) Most teachers in this school display student work on the walls of the classroom. (SQ 28)

   d) Teachers in this school usually check to make sure students do their homework. (SQ 32)

   e) Most teachers in this school praise students when they do a good job on school work. (SQ 33)

6. Students' Perceptions of Teacher Activities

   In the following pairs of items, choose the statement that you think the teachers in this school are most interested in.

   a) Teaching you how to read and write well.

      Teaching you about right and wrong. (SQ 15)

b) Helping you do as well as possible on tests like MBS or MAT.

Teaching you how to behave properly. (SQ 17)

7. Monitoring of Student Progress

a) How often, on the average, do teachers in this school evaluate and record student progress? (PQ 25)

b) How often do you evaluate and record student progress? (TQ 33)

Human Dynamics

1. Student Attendance

a) The average daily attendance for the month of February, 1981 (from records).

2. Teacher absenteeism

a) The average number of days absent for the 1980/81 school year - classroom teachers only. (from records)

3. Teacher Commitment

a) To what extent do you feel satisfied in teaching at this school? (TQ 31)

b) There is a high level of commitment to education among staff members. (TQ 59)

c) Teachers feel a sense of pride in their work. (TQ 62)

4. Students' Satisfactions with School, Teachers, Principal

a) How would you rate this school compared to others in the district? (SQ 8)

b) Although teachers are different, most of the teachers in this school are: (SQ 11)

c) I think the principal of this school is: (SQ 12)

d) The principal in this school sees and talks with students. (SQ 23)

e) Most of the students in this school are happy about the school. (SQ 29)

5. Students' Aspirations

a) If you could go as far as you wanted to in school, how far would you like to go? (SQ 6)

b) Sometimes what you want to happen is not what you think will happen. How far do you think you will go in school? (SQ 7)

6. Students' Perceptions of Classmates' Attitudes About School

   a) Students in this school take a lot of care about their school work. (SQ 18)

   b) Most students in this school don't care if they get bad grades. (SQ 27)

   c) Students in this school do not pay much attention to school rules and regulations. (SQ 30)

Student Population - Socioeconomic Make-up

1. Percentage of Disadvantaged Students

   a) Percentage of students receiving free lunches, calculated by dividing average number of free lunches by average daily attendance, for month of February, 1981 (from records).

APPENDIX B

PRINCIPAL, TEACHER, AND STUDENT QUESTIONNAIRES

Office of Research & Evaluation
School Effectiveness Study

PRINCIPAL QUESTIONNAIRE

Directions: This questionnaire gives you an opportunity to express your views of this school and your job. Please check the number of the appropriate response.

The value of the questionnaire depends upon your candidness. We ask that you respond openly & carefully. We do not need to know who you are personally, so please do not sign the questionnaire. Thus, the information you give us is completely confidential.

Thank you for your cooperation.

1. Sex:

Male	Female
1___	2___

2. Ethnicity:

Black	White	Hispanic	Other
1___	2___	3___	4___

3. Age:

26-35	36-45	46-55	Over 55
1___	2___	3___	4___

	1st yr.	1-4 yrs.	5-9 yrs.	10-14 yrs.	15+ yrs.
4. How long have you been a principal?	1___	2___	3___	4___	5___
5. How long have you been a principal at this school?	1___	2___	3___	4___	5___

	BA, BS	BA BS+	MA,MS EdM	MA+	PhD EdD
6. Indicate your level of professional training.	1___	2___	3___	4___	5___

	None	1 or 2	3 or More
7. How many professional journals do you regularly read?	1___	2___	3___
8. How many professional meetings do you attend per year (average)?	1___	2___	3___

9. In your judgment, what is the general reputation of this school in the District?

Among the best	1___
Better than average	2___
About average	3___
Below average	4___
Inferior	5___

10. Approximately what percentage of a typical school day does the average teacher in your school spend on each of the following activities?

Parent-teacher contacts (notes to parents, conferences, phone calls, etc.) ____%

Classroom, small group & individual instruction ____%

Administrative duties (taking attendance, filling out report cards or other forms, etc.) ____%

Establishing and maintaining order in the classroom ____%

Time between lessons (before & after class, moving children from one activity to another, etc.) ____%

Other (specify) ______________________ ____%

11. With regard to student achievement, how good a school do you think this school can be, compared to others in the District?

Among the best 1___

Better than average 2___

About average 3___

Below average 4___

Inferior 5___

12. In general, how are students in the same grade level assigned to different classrooms in this school?

Homogeneous grouping according to ability in all subjects 1___

Homogeneous grouping according to ability in some subjects 2___

Heterogeneous ability grouping 3___

No intentional grouping or random grouping 4___

Other (specify) ______________________ 5___

13. In general, how do teachers group students within their classrooms in this school?

Homogeneous grouping according to ability in all subjects 1___

Homogeneous grouping according to ability in some subjects 2___

Heterogeneous ability grouping 3___

No intentional grouping or random grouping 4___

Other (specify) ________________________ 5___

14. If there are different ability groups within the classroom, how many groups, on the average, are there?

Two	Three	Four	Five or More	N/A*
1___	2___	3___	4___	5___

*N/A = Not Applicable

15. During the course of the year, is it possible for children to move from one group to another, depending on their performance?

Yes	No	N/A
1___	2___	3___

16. If children are grouped by ability in your school (either within the classroom or between classrooms), what determines the group in which a child is placed?

Test scores only 1___

Test scores & teacher judgment 2___

Teacher judgment only 3___

Other (specify)

___________________ 4___

17. To what extent do the upper elementary teachers, 3-8 grades, individualize the instructional programs for their students?

All plan individual programs for most students	1___
Most teachers have some individualized programs	2___
Individualization varies from teacher to teacher and from time to time	3___
Most teachers have common instructional programs for their students	4___
All teachers have common instructional programs for their students	5___

18. On the average, what achievement level can be expected of the students in this school?

Much above national norms	1___
Slightly above national norms	2___
Approximately at national norms	3___
Slightly below national norms	4___
Much below national norms	5___

	90% or More	70-89%	50-69%	30-49%	Less Than 30%
19. What percentage of the students in this school do you expect to complete high school?	1___	2___	3___	4___	5___
20. What percentage of the students in this school do you expect to attend college?	1___	2___	3___	4___	5___
21. What percentage of the students in this school do you feel are capable of learning to read by the end of the second grade?	1___	2___	3___	4___	5___

22. What proportion of the teachers in this school would prefer to be teaching in anouther school?

About All	About 75%	About Half	About 25%	Almost None
1___	2___	3___	4___	5___

23. What percentage of your time in a typical week is devoted to each of the following activities?

Long range curriculum planning _____%

Supervision of instructional staff _____%

Supervision of non-instructional staff _____%

Parent and community concerns _____%

Discipline _____%

Other administrative duties (specify) ______________________________ _____%

24. In general, how are instructional strategies most often determined in this school?

By the progress of the class as a whole 1_____

By the progress of small instructional groups within the classroom 2_____

By the progress of the individual student 3_____

Other (specify) ______________________________ 4_____

25. How often, on the average, do teachers in this school evaluate and record student progress?

Daily	2-3 Times a week	Weekly	2-3 Times a month	monthly	Less than once a month
1____	2____	3____	4____	5____	6____

26. How often do you suggest ways of improving student achievement to your teachers?

Very Often	Often	Seldom	Never
1____	2____	3____	4____

27. Do you have definite ideas about how instruction should be provided to students?

I have a distinct point of view, and I promote It 1_____

I express some opinions, but do not promote a point of view 2_____

I generally allow teachers to develop their own programs 3_____

Read the following pairs of items. Choose the statement with which you most strongly agree.

28. The biggest problem with students today is that they do not respect authority. 1______

The biggest problem with students today is that they are not interested in learning. 2______

29. It is the school's primary responsibility to teach students basic skills. 1______

It is the school's primary responsibility to help students do as well as possible on exams like MBS or MAT. 2______

30. The major difficulty with urban schools is that there is a lack of discipline. 1______

The major difficulty with urban schools is that too many students can not learn to read and write well. 2______

31. A larger percentage of the school budget should be allocated toward improving instructional services. 1______

A larger percentage of the school budget should be allocated toward maintaining order in the school buildings. 2______

Rate the extent to which you agree or disagree that the following statements are characteristic of your school.

SA=strongly agree; (1) A=agree; (2) D=disagree; (3) SD-strongly disagree (4)

		SA	A	D	SD
32.	In this school only a few students are achieving as well as they can.	1___	2___	3___	4___
33.	The school's goals & objectives are clearly defined.	1___	2___	3___	4___
34.	The school's instructional program is coordinated throughout all grades.	1___	2___	3___	4___
35.	The school's instructional program is coordinated in terms of content, materials and sequence of objectives.	1___	2___	3___	4___
36.	In selecting basic instructional materials, school administrators make the decisions with no input from teachers.	1___	2___	3___	4___
37.	In planning programs for the entire school, decisions are made by school administrators and teachers jointly.	1___	2___	3___	4___
38.	In evaluating school programs, decisions are made by school administrators after getting input from teachers.	1___	2___	3___	4___
39.	Teacher's evaluations are dependent upon their pupils' academic achievement.	1___	2___	3___	4___
40.	There is a high level of commitment to education among staff members.	1___	2___	3___	4___

Office of Research & Evaluation
School Effectiveness Study

TEACHER QUESTIONNAIRE

Directions: This questionnaire gives you an opportunity to express anonymously your views of this school and your job.

Please check the number of the appropriate response.

The value of the questionnaire depends upon your candidness. We ask that you respond openly & carefully. The important results are in what groups of teachers say. Therefore, we do not need to know who you are personally. Please do not sign the questionnaire.

Thank you for your cooperation.

	1st year	2-3 yrs.	4-6 yrs.	7-9 yrs.	10+ yrs.
1. How long have you taught at a public school?	1___	2___	3___	4___	5___
2. How long have you taught at this school?	1___	2___	3___	4___	5___

	3rd,4th grade	5th,6th grade	7th,8th grade
3. What grade level are you teaching?	1____	2____	3____

	BA,BS or less	BA, BS+	MA,MS EdM	MA+	PhD, EdD
4. Indicate your level of professional training?	1___	2___	3___	4___	5___

Indicate the time of your most recent training in each of the following:

	Within the past year	Within the past 3 yrs.	Within the past 5 yrs.	More than 5 yrs. ago
5. **College Courses:**	1_____	2_____	3_____	4_____
6. Other Professional Training (Specify) ________________	1_____	2_____	3_____	4_____

	None	1 or 2	3 or more
7. How many professional journals do you regularly read?	1___	2___	3___
8. How many professional meetings do you attend per year? (average)	1___	3___	3___

9. How would you rate this school compared to others in this district?

Among the best	Above average	Average	Below average	Poor
1_____	2_____	3_____	4_____	5_____

	Excellent	Good	Fair	Poor
10. How would you rate the administrative supervision that you get?	1____	2____	3____	4____
11. In general, how would you rate the planning, organizing, and scheduling of activities in your school.	1____	2____	3____	4____
12. How would you rate the physical conditions of your school?	1____	2____	3____	4____

		A great deal	A fair amount	Very little	None
13.	How much administrative supervision do you get?	1___	2___	3___	4___
14.	In general, how much consideration are your ideas or suggestions given by the administrators of your school?	1___	2___	3___	4___
15.	To what extent do the customs and norms of your school encourage the sharing of ideas among teachers?	1___	2___	3___	4___
16.	To what extent does your school utilize a team-oriented approach to problem solving?	1___	2___	3___	4___
17.	To what extent are pull-out programs (Title I, Bilingual, Remedial, etc.) coordinated with classroom instruction?	1___	2___	3___	4___
18.	To what extent do the various school programs share common goals with the classroom?	1___	2___	3___	4___
19.	How much communication and interaction regarding student progress takes place between the personnel of pull-out programs and classroom teachers?	1___	2___	3___	4___
20.	To what extent is your school's administration interested in motivating staff by encouraging and supporting them?	1___	2___	3___	4___
21.	In general, when changes are to be made which affect your job, how much input do you have.	1___	2___	3___	4___

22. How adequate in the assistance and support given by administrators to teachers in this school on strategies for improving students' academic achievement?

Very adequate	Somewhat adequate	Somewhat inadequate	Very inadquate
1_____	2_____	3_____	4_____

	Twice a month or more	Monthly	4-6 times a year	2-3 times a year	Once a year or less
23. How often does an administrator in this school visit your classroom?	1____	2____	3____	4____	5____
24. How often are teachers provided with feedback about their professional performance?	1____	2____	3____	4____	5____
25. How often do you have formal or scheduled professional contact with others in your school?	1____	2____	3____	4____	5____

26. How often do you have informal or unscheduled professional contact with others in your school?

Weekly	2-3 times a mo.	Monthly	4-6 times a yr.	3 times a year or less
1_____	2_____	3_____	4_____	5_____

27. Is teacher's assignment of homework monitored by administrators in your school?

Yes_____ No_____

28. To what extent to you feel free to talk over job problems with your principal?

Very free	Fairly Free	Not very Free	Not at all free
1____	2____	3____	4____

29. How would you rate the strictness of rule enforcement in the school?

Very strict	Somewhat strict	Somewhat easygoing	Very easygoing
1____	2____	3____	4____

30. How do you feel about the number of rules and regulations in your school?

Too many	Adequate amount	Too few
1_____	2_____	3_____

31. To what extent do you feel satisfied in teaching in this school

Very much	Somewhat	Little	Not at all
1_____	2_____	3_____	4_____

32. On the average, what level of achievement can be expected of the students in your class?

Much above national norms 1_____

Slightly above national norms 2_____

Approximately at national norms 3_____

Slightly below national norms 4_____

Much below national norms 5_____

33. How often do you evaluate and record individual student progress?

Daily	2-3 times week	Weekly	2-3 times a month	Monthly	Less than once a month
1____	2____	3____	4____	5____	6____

34. How are your instructional strategies most often determined?

By the progress of the class as a whole 1_____

By the progress of the small instructional groups within the classroom 2_____

By the progress of the individual students 3_____

Other (specify)_______________________________

35. In general, how are students in the same grade level assigned to different classes within the school?

Homogeneous grouping according to ability in all subjects 1_____

Homogeneous grouping according to ability in some subjects 2_____

Heterogeneous grouping according to ability 3_____

No intentional grouping or random grouping 4_____

Other (specify)____________________________ 5_____

36. In general, how do you group the students within your class?

Homogeneous grouping according to ability in all subjects 1_____

Homogeneous grouping according to ability in some subjects 2_____

Heterogeneous grouping according to ability 3_____

No intentional grouping or random grouping 4_____

Other (specify)______________________________ 5_____

37. How much homework do you give students each week?

No homework	Less than an hour	1-3 hours	More than 3 hours
1_____	2_____	3_____	4_____

38. How often do you assign homework?

Every night	2-3 times a week	Once a week	Less than once a week	I don't assign homework
1____	2____	3____	4____	5____

39. To what extent do you think the principal has definite ideas about how instruction should be provided to students?

The principal has a distinct point of view and promotes it 1______

The principal expresses some opinions, but does not promote a point of view 2______

The principal generally allows teachers to develop their own programs 3______

40. Approximately what percentage of a typical school day do you spend on each of the following activities.

Parent-teacher contacts (notes to parents, phone calls, conferences, etc.) ______%

Classroom, small group, or individual instruction ______%

Establishing and maintaining order in the classroom ______%

Administrative duties (attendance taking, record keeping, filling out forms) ______%

Times between lessons (before & after class, moving children from one activity to another, etc.) ______%

Other (specify)______________________________

	90% or more	70-89%	50-69%	30-49%	Less than 30%
41. How many students in this school do you think the principal expects to complete high school?	1____	2____	3____	4____	5____
42. What percentage of the students in this school do you think the principal expects to attend college?	1____	2____	3____	4____	5____
43. What percentage of students in your class do you expect to finish high school?	1____	2____	3____	4____	5____
44. What percentage of students in your class do you expect to attend college?	1____	2____	3____	4____	5____
45. From your observations what percentage of teachers in your school believe that almost all of their students can achieve minimum basic levels of competence in reading and math?	1____	2____	3____	4____	5____

From the following pairs of items, choose the statement with which you most strongly agree.

46. The biggest problem with students today is that they do not respect authority. 1______

The biggest problem with students today is that they are not interested in learning. 2______

47. It is the school's primary responsibility to teach students basic skills. 1______

It is the school's primary responsibility to help students do as well as possible on exams like MBS or MAT. 2______

48. The major difficulty with urban schools is that there is a lack of discipline. 1____

The major difficulty with urban schools is that too many students can not learn to read and write well. 2____

49. A larger percentage of the school budget should be allocated toward improving instructional services. 1____

A larger percentage of the school budget should be allocated toward maintaining order in the school buildings. 2____

Rate the extent to which you agree or disagree that the following statements are characteristic of your school.

SA=strongly agree;	A=agree;	D=disagree;	SD=strongly disagree
(1)	(2)	(3)	(4)

		SA	A	D	SD
50.	Teachers are required to follow an adopted course of study.	1____	2____	3____	4____
51.	Staff members who are interested can participate in decision making.	1____	2____	3____	4____
52.	Teachers have to follow procedures which often conflict with their own judgement.	1____	2____	3____	4____
53.	Procedures for disciplining students are well defined.	1____	2____	3____	4____
54.	Advanced degrees are an important consideration for promotion in this school system.	1____	2____	3____	4____
55.	In order to help teachers, the principal is willing to by-pass regulations.	1____	2____	3____	4____
56.	Teachers's evaluations are dependent upon their pupils' academic achievement	1____	2____	3____	4____
57.	There can be little action taken here until a superior approves it.	1____	2____	3____	4____
58.	At school meetings, discussions are mostly about educational issues.	1____	2____	3____	4____
59.	There is a high level of commitment to education among staff members.	1____	2____	3____	4____

SA=strongly agree;	A=agree;	D=disagree;	SD=strongly disagree
(1)	(2)	(3)	(4)

		SA	A	D	SD
60.	The school's goals and objectives are clearly defined.	1____	2____	3____	4____
61.	The school's administrators understand the needs of teachers.	1____	2____	3____	4____
62.	Teachers feel a sense of pride in their work.	1____	2____	3____	4____
63.	The school's communication network is open to effective two-way exchanges among administrators and teachers.	1____	2____	3____	4____
64.	Each teacher here is free to do what he/she feels is appropriate.	1____	2____	3____	4____
65.	Uniform grading procedures are required.	1____	2____	3____	4____
66.	When it comes to decisions regarding the selection of basic instructional material, school administrators make the decisions with no input from teachers.	1____	2____	3____	4____
67.	In planning programs for the entire school, decisions are made by school administrators and teachers jointly.	1____	2____	3____	4____
68.	In evaluating school programs, decisions are made by school administrators after getting input from teachers.	1____	2____	3____	4____

69. Your age:

18-25	26-35	36-45	46-55	over 55
1___	2___	3___	4___	5___

70. Sex:

Male	Female
1___	2___

71. Ethnicity:

Black	White	Hispanic	Other
1___	2___	3___	3___

Office of Research & Evaluation
School Effectiveness Study

STUDENT QUESTIONNAIRE

Directions: We are interested in your ideas about the school you go to. This is not a test. The answer to each question is a matter of opinion. Your true opinion, whatever it is, is the right answer.

Please do not sign your name. We do not need to know who you are personally.

Check the number of the answer you choose. For example, question #14 reads as follow:

> "How do you feel about the number of rules & regulations in your school"?

Too many	Right amount	Too few
1_____	2_____	3_____

If your answer is "Too many", check #1. If your answer is "Right amount", check #2, and if your answer is "Too Few", check #3.

Thank you for helping us.

1: Sex

Male	Female
1____	2____

2: Ethnicity:

Black	White	Hispanic	Other
1____	2____	3____	4____

3: How long have you been attending this school?

A few months or less	1____
Since the beginning of the school year	2____
Two years	3____
Three years or more	4____

4. What is the language you speak at home?

English	Spanish	Other (What?)________________
1____	2____	3____

5. Since last September, how many times have you been absent from school?

5 days or less	6-10 days	11-15 days	16-20 days	21 days or more
1____	2____	3____	4____	5____

6. If you could go as far as you wanted to in school, how far would you like to go?

Finish grade school	1____
Go to high school for a while	2____
Finish high school	3____
Go to college for a while	4____
Finish college	5____

7. Sometimes what you want to happen is not what you think will happen. How far do you think you will go in school?

Finish grade school	1____
Go to high school for a while	2____
Finish high school	3____
Go to college for a while	4____
Finish college	5____

8. How would you rate this school compared to others in the district?

Among the best	Above average	Average	Below average	Poor
1____	2____	3____	4____	5____

9. If you had a serious personal problem, which of these people would you discuss it with at school?

Classroom teacher	Guidance Counselor	Principal	Other adult at school	No adult at school
1____	2____	3____	4____	5____

10. How often does your teacher assign homework?

Every night	2-3 times a week	Once a week	Less than once a week
1____	2____	3____	4____

11. Although teachers are different, most of the teachers in this school are:

Very good	Good	Fair	Poor
1____	2____	3____	4____

12. I think the principal of this school is:

Very good	Good	Fair	Poor	I don't know the principal that w
1____	2____	3____	4____	5____

13. How would you rate the strictness of rule enforcement in the school?

Very strict	Somewhat strict	Somewhat easygoing	Very easygoing
1____	2____	3____	4____

14. How do you feel about the number of rules and regulations in your school?

Too many	Right amount	Too few
1____	2____	3____

In the following pairs of items, choose the statement that you think the teachers in this school are most interested in.

15. Teaching you how to read and write well. 1____

Teaching you about right and wrong. 2____

16. Showing you how to get along with other people. 1____

Teaching you mathematical skills. 2____

17. Helping you to do as well as possible on test like MBS or MAT. 1____

Teaching you how to behave properly. 2____

Check the number which expresses how much you agree or disagree with the following statements:

SA=strongly agree; A=agree; D=disagree; SD=strongly disagree

	SA	A	D	SD
18. Students in this school take of lot of care about their school work.	1___	2___	3___	4___
19. People like me will not have much of a chance to do what we want in life.	1___	2___	3___	4___
20. Most students don't do as well as they could in school because they are afraid other students won't like them as much.	1___	2___	3___	4___
21. It is important to teachers in this school that their students learn their school work.	1___	2___	3___	4___
22. Teachers in this school control their classes adequately so that other students do not disrupt the class.	1___	2___	3___	4___
23. The principal in this school sees and talks with students.	1___	2___	3___	4___
24. Teachers in this school try extra hard to help students.	1___	2___	3___	4___
25. In this school there are lots of rewards given to students who get good grades.	1___	2___	3___	4___
26. Students in this school often interrupt while someone else is talking.	1___	2___	3___	4___
27. Most students in this school don't care if they get bad grades.	1___	2___	3___	4___

SA=strongly agree; A=agree; D=disagree; SD=strongly disagree

	SA	A	D	SD
28. Most teachers in this school display student work on the walls of the classroom.	1___	2___	3___	4___
29. Most of the students in this school are happy about the school.	1___	2___	3___	4___
30. Students in this school do not pay much attention to school rules and regulations.	1___	2___	3___	4___
31. Most of the teachers that I know in this school don't care how hard the student works, as long as he or she passes.	1___	2___	3___	4___
32. Teachers in this school usually check to make sure students do their homework.	1___	2___	3___	4___
33. Most teachers in this school praise students when they do a good job on school work.	1___	2___	3___	4___

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